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ABSTRACT

Drawn from presentations at the 1977 meeting of the North Central Reading Association, this yearbook includes sections on programs and centers; professional training; clinical problems and methods; research; the Roger Pepper Research Award presentation; and the invitational address. Papers include: "Use of Galvanic Skin Response, Heart Rate, Respiration Rate, Bett's Criteria, and Self-Rating Scales to Compare College Students' Degrees of Frustration on Informal Reading Inventories" (Lindasue Linn Williams); "Meeting the Educational Challenge of 'Open Admissions' in Community Colleges" (Grace A. Millas); "Reading for Adults: An L.R.C. Perspective" (Elaine E. Cherney); "The Use of Video Tape to Reach Criterion Performance: A Self-Shaping Teacher Training Procedure" (Marylen S. Oberman and others); "Training Tutors to Teach Students Reading Strategies in the Content Areas" (Carole M. Johnson); "Using Low Cost Micro-Computers to Train Secondary Teachers in Reading" (Michael L. Kamil and Franz J. Frederick); "Teaching Reading in the ESL Classroom" (Susan Kenyon Herbert); "The Use of the Cloze Technique as a Seminal Cognitive Process" (Bruce A. Lloyd and Rosalie C. Lloyd); "Specific Procedures for Reading Rate Improvement" (Walter J. Lamberg and Rowena Wilhelm); "Teaching Vocabulary for Memory through Word Relationships" (James E. Coomber and Howard Peet); "Writer and Reader as Complementary Roles" (Barry M. Kroll); "De-Mystifying the Reading Process" (Judith O. Best and Nell C. Gillis); "Can College Students Improve Reading Skills in an Individualized, Self-Paced Reading Course?" (Michael Arrington); "A Review of Significant Studies with High Risk Students: Remediation for College Students" (Mark E. Thompson); and "Yesterday's Students, Tomorrow's Challenge" (Joseph A. Fisher). Appendixes include cumulative author and topical indexes for volumes 1 through 9. (RS)

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COLLEGE and ADULT READING

VOLUME IX

North Central Reading Association

1978 Yearbook

Edited by

JOSEPH A. FISHER
Drake University

1978

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PREFACE

This is Volume IX of the proceedings of the North Central Reading Association. It is drawn from presentations made at the twentieth annual meeting of the organization held at the University of Illinois at Urbana-Champaign on October 29 and 30, 1977. Program arrangements for this conference were under the direction of Professor Boyd B. Jackson of the University of Illinois.

The board of directors and membership wish to commend Professor Jackson for his excellent service to the association and express their sincere appreciation for a very fine conference. A very special thanks is also extended to the program participants whose scholarship and professional commitment give substance to the very highest purposes of our association. For the atmosphere of informal, professional collegiality and friendship, which has traditionally been a hallmark of the programs of the North Central meetings, we thank all who attended the conference.

The Roger Pepper Memorial Award represents the association's recognition of an outstanding doctoral dissertation in the field of Adult Reading and Study Skills. In this volume we take special pleasure in publishing the paper presented by the 1977 winner of this award, Dr. Lindasue Linn Williams.

With her retirement from the University of Indiana, Dr. Nancy Davis has also

resigned her position with the Board of Directors. Widely known for her many publications, she has served the association as speaker, contributor to the yearbook, program chairman and member of the board of directors. She has contributed immensely to the informal discussions of "vital issues" which have developed into a special event of their own in our annual meeting. The organization wishes to thank Nancy for her dedication, service and friendship during these many years and wish her continued happiness, success and personal fulfillment in her retirement years.

The editor wishes to thank Mrs. Margaret Foglesong who has prepared this manuscript for publication, and the Office of Student Development Services of Drake University for granting him both the time and facilities needed to complete the project.

Joseph A. Fisher

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USE OF GALVANIC SKIN RESPONSE, HEART RATE, RESPIRATION RATE, BETT'S CRITERIA, AND SELF-RATING SCALES TO COMPARE COLLEGE STUDENTS' DEGREES OF FRUSTRATION ON INFORMAL READING INVENTORIES

Lindasue Linn Williams
University of Pittsburgh

ABSTRACT

Physiological signs of frustration as monitored by the polygraph, pronunciation and comprehension signs of frustration as determined by Betts Criteria, and difficulty ratings by college subjects themselves were compared. By use of the multitrait multimethod matrix, intercorrelations were studied. Bett's Criteria and the self-ratings tended to be moderately related. Comprehension changed more than pronunciation with relation to the degree of difficulty of the reading material. Although GSR and heart rate were most consistent in measurement, no physiological variable definitely discriminated frustrating from nonfrustrating reading material.

The purpose of this study was to compare college students' degrees of frustration on informal reading inventories by the use of five methods of measurement: galvanic skin response, heart rate, respiration rate, Betts's Criteria, and self-rating scales. The polygraph was used to monitor galvanic skin response, heart rate, and respiration rate. Bett's Criteria were measured by the traditional method of determining the percentage of oral reading pronunciation errors and the percentage of errors on oral comprehension questions. The self-rating scales were marked by the subjects themselves.

The sample consisted of 42 subjects. They were randomly selected from the entire population of undergraduate students at Indiana University of Pennsylvania, Indiana, Pennsylvania. Therefore, students with a wide variety of academic concentrations were included.

The tests were individually administered in an isolated room where interruptions and distractions were kept to a minimum and a standard procedure could be used. Reading passages were projected onto a screen in front of the subject by means of an overhead projector. A portable polygraph was used to produce polygram tracings of the physiological changes in galvanic skin response, heart rate, and respiration rate undergone by the subject during the reading. A magnetic tape recorder was utilized to record the subject's oral reading and answers to comprehension questions.

Since the study was designed to compare degrees of frustration, an attempt was made to elicit anxiety from each subject by producing a situation that was judged to be a frustrating reading situation. Each level of the informal reading inventory consisted of two paragraphs which had been selected through the use of cloze tests and student ratings to represent easy, moderate, and extremely difficult reading materials. The levels of readability represented on the inventory were measured by the FOG Index to be 4, 14, and 30. FOG level 4 approximated the independent reading level; FOG level 14 approximated the instructional reading level; FOG level 30 approximated the frustration reading level for the sample used.

The data were analyzed as objectively as possible. The planimeter method was used to analyze galvanic skin response area in square inches; correction for individual differences was made as well as transposition (Rose) into micromhos for comparative purposes. Heart rate was measured in beats per minute, and respiration rate was measured in respirations per minute. Tape recordings were analyzed for oral reading errors and comprehension errors.

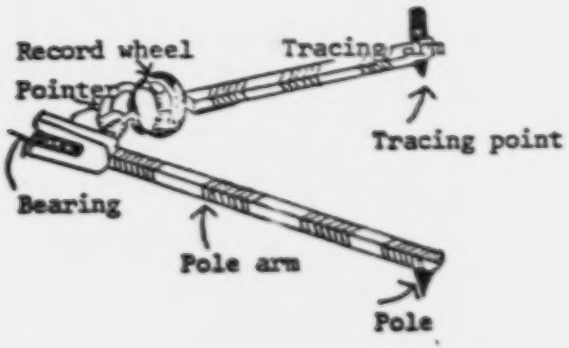

Fig. 1.-- Parts of the planimeter

All of the physiological data were recorded on the polygram charts. As each physiological response was detected and transformed into electrical impulses by the polygraph, several recording pens mechanically reproduced the impulses in chart form. These polygrams were then analyzed in terms of galvanic skin response (GSR), heart rate (HR), and respiration rate (RR).

Fig. 2. -- Polygram tracing

A systematic experimental design was proposed by Campbell and Fiske for the dual purpose of convergent and discriminant validation, which they called the multitrait-multimethod matrix. This design was utilized.

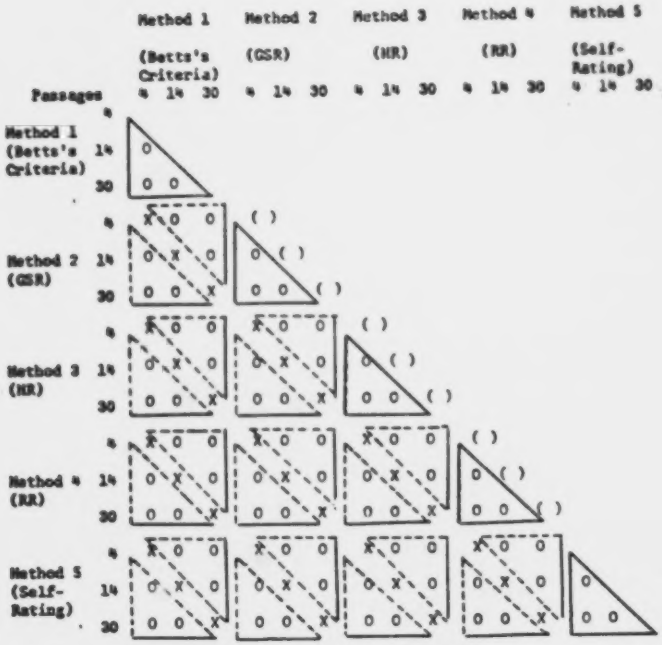

Fig. 6—Actual plan for 5 X 3 matrix

In this matrix, the reliability coefficients were the three sets of values in parentheses. For purposes of this study, reliabilities for Betts's criteria and for the self-ratings could not be determined because the scores could not be split in half. GSR, HR, and RR reliabilities, however, were calculated using

coefficient alpha. In the cases of GSR and HR, alpha was applied to the subtests of silent reading on both paragraphs and oral rereading as well. In the case of RR, alpha was applied to only two subtests: silent reading of paragraph one and paragraph two. Alpha was expected to indicate what proportion of the variance of the composite was due to common factors among the subtests. Even though pronunciation and comprehension could not be considered separately when utilizing Betts's Criteria to determine reading level, separate alpha coefficients were nevertheless calculated for pronunciation and comprehension. These reliabilities showed the degree of agreement between the even and odd lines of printed material for pronunciation and among the five comprehension questions at each level.

The formula for coefficient alpha which was used to determine subtest consistency was:

$$a = \frac{n}{n - 1} \left(1 - \frac{\Sigma V_{subtest}}{V_{test}} \right)$$

In this formula n equalled the number of subtest groups.

Also included in the matrix were the validity coefficients (represented by X) which fell into a diagonal format. Each method was correlated with each of the other four methods. In all instances, separate validity coefficients were given for each readability level.

Other correlations were included in the heterotrait-hetero-method triangles (represented by broken lines) and the heterotrait-monomethod triangles (represented by solid lines). All calculations for reliability and validity coefficients were done on a Xerox Sigma Six computer located at Indiana University of Pennsylvania. All coefficients except reliability were obtained through standard programs; the coefficient alpha program was written by a programmer.

By use of the multi-trait-multimethod matrix, the intercorrelations among all methods and reading passages were examined. Convergent and discriminant validity were examined as well as reliability in terms of the patterns represented within the matrix. Significant correlations were considered to be at the .05 level of confidence.

These conclusions were drawn for populations of college students with backgrounds similar to those of Indiana University of Pennsylvania:

1. The question of whether galvanic skin response, heart rate or respiration rate could be used to discriminate frustrating from nonfrustrating reading material could not be definitely answered from the data. However, it was indicated that respiration rate and heart rate may have correlated too highly among levels to discriminate frustrating from nonfrustrating reading material. The reason that respiration rate on the three reading passages correlated so highly was that the respiration rate changed very little from level to level. Heart rate, also, changed

TABLE 1

MULTITRAIT-MULTIMETHOD MATRIX

Methods		BC			RT GSR			HR			RR			SR		
Traits		4	14	30	4	14	30	4	14	30	4	14	30	4	14	30
BC	4															
	14	.260														
	30	.133	.140													
RT GSR	4	.152	.188	.155	(.545)											
	14	.090	.176	.036	.519	(.487)										
	30	.164	.337	.138	.037	.097	(.539)									
HR	4	.078	.124	.068	.075	.271	.020	(.650)								
	14	.039	.163	.018	.051	.267	.235	.758	(.639)							
	30	.006	.091	.038	.010	.248	.040	.843	.796	(.659)						
RR	4	.179	.026	.295	.238	.002	.055	.297	.220	.156	(.342)					
	14	.094	.242	.023	.079	.287	.186	.190	.201	.113	.524	(.121)				
	30	.075	.083	.081	.151	.082	.025	.328	.198	.237	.493	.704	(.288)			
SR	4	.111	.170	.155	.168	.073	.092	.065	.151	.154	.175	.249	.213			
	14	.248	.397	.196	.075	.055	.035	.004	.132	.019	.031	.097	.139	.124		
	30	.028	.068	.486	.074	.081	.090	.244	.139	.137	.203	.004	.107	.310	.099	

BC = Betts's Criteria
RT GSR = Rose Transformed Galvanic Skin Response
HR = Heart Rate
RR = Respiration Rate
SR = Self-Rating

TABLE 3

INTERCORRELATIONS OF HIGH PHYSIOLOGICAL METHODS WITH PRONUNCIATION AND COMPREHENSION METHODS

Methods		PRO			COMP			RAW GSR			RT GSR			HR		
Traits		4	14	30	4	14	30	4	14	30	4	14	30	4	14	30
PRO	4	(.297)														
	14	.431	(.257)													
	30	.698	.508	(.545)												
COMP	4	.493	.492	.311	(.092)											
	14	.243	.179	.222	.190	(.290)										
	30	.098	.123	.043	.140	.298	(.606)									
RAW GSR	4	.368	.113	.073	.090	.186	.150									
	14	.579	.115	.290	.079	.102	.128	.530								
	30	.210	.089	.048	.167	.184	.309	.390	.408							
RT GSR	4	.149	.044	.006	.157	.006	.176	.755	.451	.550						
	14	.088	.054	.028	.069	.167	.007	.020	.492	.195	.518					
	30	.069	.188	.093	.209	.264	.319	.010	.028	.882	.037	.097				
HR	4	.157	.093	.052	.010	.004	.084	.013	.048	.032	.075	.271	.050			
	14	.162	.073	.088	.007	.078	.027	.029	.023	.177	.051	.267	.235	.758		
	30	.230	.217	.062	.011	.014	.067	.075	.018	.007	.010	.248	.040	.843	.798	

PRO = Pronunciation
COMP = Comprehension
RAW GSR = Raw Score Galvanic Skin Response
RT GSR = Rose Transformed Galvanic Skin Response
HR = Heart Rate

so little from level to level that measuring a subject on this variable may be of little use in discriminating frustrating from nonfrustrating reading material. It seemed that frustration on reading passages of varying difficulty levels should correlate to some degree when measured by the same method; however, the extent to which they should differ could not be determined from this data.

2. Comprehension changed more than pronunciation to the degree of difficulty of the reading material itself. In most instances there was a marked decrease in the comprehension means and a marked increase in the comprehension variances as the reading passages became more difficult. The means and variances for pronunciation changed very little as the reading passages became more difficult. However, the question of whether Betts's Criteria of pronunciation errors or comprehension errors were more accurate measures of degree of frustration could not be definitely answered from the data.

3. Betts's Criteria and the self-rating scales were moderately related. Validity coefficients for reading passages written at readability levels of 14 and 30 were significant at the .05 level of confidence. Since level 30 was judged to consist of extremely difficult reading material, Betts's Criteria (pronunciation and comprehension used together) and the subjects' own subjective judgment were both able to give a fair indication of the difficulty of the reading materials between levels 14 and 30. Therefore, the level 30 reading passage which was determined to be

frustrating in terms of Bett's Criteria was also determined to be frustrating in terms of the self-ratings.

4. The only methods which tended to measure the same aspects of college students' degrees of frustration on the informal reading inventories were Betts's Criteria and the self-rating scales on passages 14 and 30. Correlations of .486 between self-rating scales and Betts's Criteria at level 30 and of .397 between self-rating scales and Betts's Criteria at level 14 produced the most evidence of convergence within the multitrait-multimethod matrix. These correlations, however, were considered moderately low.

5. None of the five methods measured degree of frustration on reading passages written at three levels of difficulty with a high degree of validity. An overall examination of the matrices showed a near independence of levels and methods as exemplified by the near-zero validity coefficients on the diagonals and the scarcity of significant correlations within the triangles. The near independence of methods also tended to indicate that the methods were not all measuring the same aspects of college students' degrees of frustration on informal reading inventories.

6. None of the methods were shown to definitely discriminate among frustrating and nonfrustrating reading passages. However, some evidence indicated that comprehension and Rose-transformed galvanic skin response as indicators of degree of frustration may be worthy of further research. Correlations which were

significant at the .05 level of confidence were found between galvanic skin response and comprehension at level 30. Also, the convergence of self-ratings and Betts's Criteria at levels 14 and 30 may be an indication that these two methods can be useful in discriminating frustrating from nonfrustrating reading passages. However, the data of this study only showed that self-ratings and Betts's Criteria were significantly related (.05 level) on passages 14 and 30.

7. The methods of Rose-transformed galvanic skin response and heart rate were significantly consistent (.05 level) on all three reading passages. Respiration rate, however, had a significant reliability value only at level 4. Even though that value was significant at the .05 level, it was still low. Pronunciation and comprehension had significant reliability values (.05 level) on passage 30 only. Since the reliability measures reported in this study were coefficients of equivalence, confidence for reproducibility of results in measurement could only be placed in Rose-transformed galvanic skin response and heart rate.

Recommendations

Several questions which could be used as the basis for further research were generated by the examination of the hypotheses of this study:

1. To what degree should reading passages of varying difficulty levels correlate when they are measured by the same method?

2. Can Rose-transformed galvanic skin response be used to discriminate frustrating from nonfrustrating reading material?

3. Is comprehension or pronunciation a more discriminating measure of college students' degrees of frustration on informal reading inventories?

4. To what degree are galvanic skin response and comprehension related when used to measure degrees of frustration on informal reading inventories?

5. To what degree are galvanic skin response and pronunciation related when used to measure degrees of frustration on informal reading inventories?

6. How do Betts's Criteria and self-ratings correlate when used with samples of larger sizes and other age levels?

7. How do raw galvanic skin response and Rose-transformed galvanic skin response correlate when used with samples of larger sizes and other age levels?

8. How consistent are the methods of measurement used in this study when used with samples of larger sizes and other age levels?

Other possibilities for further research were indicated because of the limitations of this study. For example, a more sensitive instrument for the monitoring of galvanic skin response could be used to measure degrees of frustration on informal reading inventories. Instruments are also available for monitoring pulse through the finger rather than through the arm. In this particular study, it was impossible to keep the blood pressure cuff inflated on the subject's arm for any extended period of time because the cuff shut off blood circulation in the arm.

Since none of the methods used in this study measured the degree of frustration on reading passages written at three levels of difficulty with a high degree of validity, perhaps the entire concept of frustration needs to be redefined. Another concept which is probably multifaceted and, therefore, worthy of further definition is that of comprehension. Even the concept of anxiety itself needs to be made clearer since, in this study, some subjects seemed to be concerned or even anxious about the testing while others were not.

Since a number of studies have already been done to correlate reading levels with cloze procedures, more study in this area is also recommended. Existing knowledge about the reading levels of elementary students could be extended to include mature readers.

Knowledge about the common pronunciation and comprehension problems of college students have implications for the teaching of reading at all levels. Knowledge of the reading problems of college students also has implications for college teachers; more attention needs to be paid to the reading levels of assigned college texts and to other instructional techniques that relate to reading skills. The fact that the college students in this study made the most oral reading errors in disregarding punctuation, repeating, and substituting words and phrases may be useful. Likewise, it may be helpful to know that the college students in this sample were not as proficient in the comprehension skills of reorganization, inferential comprehension, evaluation, and

appreciation as they were in the area of literal comprehension.

It may be helpful for teachers of all grade levels to be aware that Betts's Criteria and self-ratings were moderately related in this study. Perhaps the students themselves should be asked to rate their own reading materials more often.

Also, in the course of this study it was discovered that only the FOG Index was of much use in evaluating the readability level of adult reading materials, particularly if the readability level exceeded eleventh or twelfth grade. More research is needed in order to develop a valid readability formula for use with difficult materials.

In fact, the concept of readability itself should be popularized more so that it would become more familiar to professionals in other disciplines. For example, those professionals who distribute written literature to their patients or clients need to be aware of the readability of the printed materials in relation to the reading frustration levels of their readers.

Finally, the conceptualization that subjects' degrees of frustration on informal reading inventories was a response tendency that could be observed under more than one experimental condition and that the frustration could be differentiated on reading passages of varying difficulty levels could be applied to other multitrait-multimethod matrices. This same research design could be used more in future research.

MEETING THE EDUCATIONAL CHALLENGE OF "OPEN ADMISSIONS" IN COMMUNITY COLLEGES

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ABSTRACT

This study examines the community college enrollment as it is affected by open admissions. It also examines the philosophy and procedures of an individualized learning center to evaluate its success in meeting the diverse needs of the students. A profile of 6700 students enrolled at Parkland College in the fall of 1976 is the basis for the discussion. This profile identifies large numbers of students with serious educational deficiencies and/or barriers to learning. The study indicates that a learning center which offers individualized instruction in reading, study skills, and a variety of content areas provides the flexibility and adaptability to meet the educational challenges posed by open admissions.

In accordance with the 1965 Illinois Public Junior College Act, all Illinois community colleges adhere to an "open admissions" policy--that is, all high school graduates and all non-high school graduates 18 years of age or older must be allowed to enroll. Such a policy for admissions poses unique challenges for educators. Students' educational needs are as diverse as their backgrounds. This diversity in educational background as well as in ethnic origin, age, and life experiences is particularly evident among

the 6,600 students currently enrolled in Parkland College, a two-year community college which serves the Illinois District 505 citizens.

Student Body Profile

A profile of the Parkland student enrollment, broken down into categories and statistical possibilities, would be helpful in clarifying the problems faced by staff members and the need for corrective education to deal with problems that relate to corrective education in a school of this type.

The make-up of the student population has been relatively stable for the past few years, and data from Parkland's Focus on Students, 1974-77 (currently unpublished), shows the following profile of the 6369 day and evening students enrolled for the fall semester during the 1976-77 academic year which can be generalized to describe the current population.

1. Enrollment of women was slightly higher than that of men--52.5% and 47.5% respectively. However, in talks with admissions office personnel this week, I have learned that the 1977 Fall early enrollment figures show that women outnumber men 66% to 34%. Admissions representatives feel that a trend toward proportionately higher enrollment of women has begun to emerge in the past few years.

2. Although primarily populated by White American students, the student body represents diverse ethnic origins. (Rounding error accounts for differences in total and 100% on this and following tables.

Enrollment by Ethnic Origin--Fall, 1976

Ethnic Origin	Number	% of total*
White American	5767	90.5
Black American	482	7.5
Spanish	47	.7
Oriental	34	.5
American Indian/Alaskan Native	22	.3
No indication or response	17	.3
Total enrollment	6369	99.8%

3. Although the mean age of evening students is higher than that of day students (40% of this group being over 30 as opposed to 14.5% of the day students being over 30) the greatest number of Parkland students are in the 16-20 age bracket--almost 40% of the total enrollment.

Enrollment for Fall Term, 1976

Day Time Enrollment--4210 Students		Evening Enrollment--2708 Students	
Age Group	% of Total	Age Group	% of Total
16-20	46.8	16-20	8.6
21-30	37.7	21-30	48.9
31-40	9.1	31-40	19.3
41+	5.4	41+	21.4
No response	.6	No response	1.2
% of Total	99.6%	% of Total	99.4%

(Note: total enrollment of 6918 includes some students enrolled in both day and evening courses.)

4. Of the 246 transfer students admitted for the fall term, over half (133) came from public and private senior institutions, 26% (64) came from public and private community and junior colleges, and 20% (49) came from out-of-state senior institutions and community and junior colleges.

5. ACT composite scores for 887 students enrolling as freshmen for the fall term suggest that the mean score for Parkland entering freshmen falls below the mean score for all other college-bound students. The mean score for Parkland entering freshmen was 16.9 whereas the mean score for all other college-bound freshmen was 18.7 out of a possible 36 points.

6. ACT information on high school grades suggest that a majority of Parkland students would earn "average" grades. Based upon comparisons of H.S.A. of entering freshmen and the national norm group, as mentioned above. Parkland students enter with averages somewhat below that of the norm group--2.6 as opposed to 2.9.

7. Fall, 1976 enrollment figures by instructional program show that over half of Parkland's students are enrolled in terminal Occupational/Career programs. Specifically, this group comprises 60.7% of the total enrollment; those in baccalaureate programs make up 32% of the total; students in General Studies account for 6.7% of the early enrollment figure of 5,832 students.

8. An examination of annual credit hour outcomes by instructional areas for

the 1976-77 year indicates a high rate of uncompleted course work within the college which is not atypical of the situation in most community colleges. In Occupational programs, 20% of the course work was not completed. In Baccalaureate Programs the rate increases to 25% uncompleted. In all other studies, 33% were not completed. Of all credit hours attempted college-wide, 24% were officially dropped or left unfinished, resulting in an "N" or insufficient attendance designation.

9. Parkland's student body includes both extremes of the educational spectrum. The student population includes those persons who have completed undergraduate and even graduate schooling, as well as several groups of students with serious educational deficiencies and/or special learning problems.

a. Each year Parkland's enrollment includes an increasing number of students with physical handicaps; currently there are 18 such students.

b. Approximately 25 to 50 non-high school graduates enroll each semester to complete work for their G.E.D.'s.

c. Every year thirty-five socio-economically and academically disadvantaged students are enrolled in Parkland's Preparedness Program to enable these students to prepare for college-level work.

d. Approximately 80 foreign born students--primarily Vietnamese and Spanish speaking students--attend Parkland. Within this number are both those who were highly educated in their own language as well as those who were not literate in their own language. In either case, most of these students find their

lack of facility with the English language a block to success in regular college courses as well as in the vocational and social aspects of their lives in this country.

10. Finally, although hard data is not available to substantiate the following assumptions about other types of students who face particularly serious barriers to learning, these additional statements can be verified by almost any Parkland instructor:

a. Many students lack the necessary life experiences and social skills to cope successfully with their personal problems and college-related experiences.

b. Many students are returning to school after many years of absence--often as much as 15 or 20 years--and they express a marked lack of confidence in their ability to compete successfully in present-day classes.

c. Although they may have received high school diplomas, large numbers of students who attend have low reading and language skills and face schooling with fear if not outright hostility.

d. Many students combine jobs with schooling. It is not uncommon for students to work a night shift before coming directly to school. Very often the working student is also faced with shifting work schedules which interfere with their meeting normally scheduled classes.

e. Many students who are parents, often from one-parent families, must schedule classes around school hours as well as work shifts. When their children are sick, the public schools are closed,

or sitters do not arrive as expected, these Parkland students must make the decision to miss classes or to bring their children with them.

Meeting Needs

One might ask, how can any institution effectively meet the special educational needs of so diverse a group of students? What means exist to cope with the significant barriers to learning faced by so many of our students--

The handicapped students--who lack basic skills or the confidence to use their once learned skills? The foreign-born students--with minimal facility in speaking English? The students whose social skills are so lacking as to preclude appropriate and effective interpersonal interactions within classroom settings and within the realm of their own personal lives? The students who must schedule both work and classes? The students whose home and job commitments detract from classroom and study time?

As is true in most community colleges, Parkland tries to meet the needs of these individuals through special instructional programs and supportive counselling and advising systems. Furthermore Parkland offers a number of basic remedial courses in the areas of reading, study skills, E.S.L., English, and mathematics. However, all of these support systems are not sufficient in themselves to meet the educational needs of these students successfully because of the problematic circumstances already mentioned.

The Parkland College Learning

Grace A. Millas

Laboratory is designed to provide a major support system to all areas of the college and to augment the other agencies within the school which aim at helping the problem student and the student with learning problems. The Lab offers individualized instruction in a variety of areas--reading, study skills, writing, speech, math, accounting, G.E.D., and E.S.L. Vocational, academic, and personal counseling are also available for any students enrolled in the Lab.

A student coming to the Lab for the first time is shown a caramate presentation which explains the purposes and procedures of the Lab. After viewing the caramate presentation, the student is asked to fill out a lab folder which includes several pages of personal data which helps the Lab staff understand his background and learning needs. The questions are also designed to help the student clarify his goals for working in the Lab. Next, he is assigned an instructor in his work area.

Each student is expected to meet with his instructor weekly, for a 15 to 30 minute conference. The instructor will carry out any needed diagnostic testing and aid the student in determining his entering skill level and goals for the term. The instructor will also write an assignment sheet or contract which specifies exactly what work the student will complete to help him meet his goals. During the weekly conference with his instructor, a student may discuss the quantity and quality of his work completed since the last conference, ask questions about his assignments, and possibly discuss any adjustments that need to be made

in the contract. If it seems advisable, the instructor may set up additional times for the student to receive help from student or lab assistants.

A poster identifying the Lab staff as a whole and a roster of the staff members on duty at any given time are placed in the general work room for the student's reference. Student assistants and Lab assistants are on duty at all times to help students locate and use materials. Although they may be assigned other duties, their prime task is to assist students. A chart showing the Lab hours is also posted. The Lab is open from 8:30 to 3:30 Monday through Friday and 5:30 to 9:30 Monday through Thursday evenings.

The student's lab folder is to be kept in the Lab at all times. It includes his contract, assignments completed and in progress, and his diagnostic tests as well as the personal data sheets. It also includes a running account of his time spent in the Lab and the work he has accomplished each time he works there.

The usual procedure for a student working in the Lab is that he gets his folder when he enters, writes down the date and his entry time, and then either begins working independently or seeks out his instructor or assistant for his regularly scheduled conference or work session. Upon completing his daily work, he is asked to follow a specific sign-out procedure. He writes in his total time for that session, referring to a simplified time conversion chart, adds his time for the day to his previous time total, indicates as specifically as possible what

assignments he completed, and then asks a staff member to sign him out, after which he replaces his folder in the proper hanging file in the filing cabinet.

Individuals may sign up for help in the Lab as credit, non-credit, or walk-in students. If a student is to receive credit, he registers for Applied Learning Skills (ALS 110). He may register for credit up to the 12th week of instruction. Time commitment per credit hour will be explained later. Credit is not transferable although it may count toward "full time" status at Parkland. A student is allowed to accumulate 8 credit hours in ALS. He is usually limited to 4 credit hours per semester unless given special permission by the Lab coordinators. He may also work in several areas. In this case, he will work with two instructors and be signed up for two separate sections of ALS--for instance, ALA 110-02 for reading and ALS 110-02 for accounting.

A credit student must spend a minimum of 15 hours in the Lab for each credit hour. For instance, if he is taking ALS for 2 credits, he must work a minimum of 30 hours; 3 credits, 45 hours, etc. This time commitment corresponds to class time in a course. For a two-credit-hour course, a student must spend twohours in class per week for 15 weeks. Non-credit students are asked to make a similar time commitment. The walk-in student is distinguished from the non-credit student in that whereas a non-credit student may make similar time commitments to credit students, walk-ins usually come in only a few times to work on lab materials assigned by course instructors and these

students usually do not need to meet regularly with a lab instructor.

ALS 110 is not designed to take the place of already existing courses. Furthermore, students are not allowed to study other course work for lab credit. Lab assignments may cover the same materials as class assignments, but they will not be exactly the same.

Because the Lab is open every day and on all evenings on which regular classes are held, students find it relatively easy to schedule their work hours and to reschedule hours they have missed because of changes in job schedules, sickness, etc.

In order to receive a quality grade for the course, a credit student must spend the minimum number of hours required according to the total credit hours he is taking. Furthermore, his grade is based upon the amount and quality of work he has accomplished and his attendance at instructor conferences. Although non-credit students receive only grades of Satisfactory (S) and Unsatisfactory (U), they are evaluated using the same criteria as credit students. During the final conference, the student is asked to fill out an exit interview form which evaluates his own work, the materials he used, his instructor conferences, and the Lab setting in general as it affected his learning.

The Parkland Learning Lab served 1318 students during the 76-77 academic year: 606 credit students, 304 non-credit students, and 408 walk-ins. Although some students are self-referred, the

population is primarily composed of students who have been referred by friends, counselors, other special interest groups within the college such as the Veterans Office, private and public agencies within the community, and instructors throughout the college.

Often the extra help given in the Lab can make the difference between a student's withdrawal or successful completion of a course. This is especially true where absenteeism has been a factor. Yet, because some referrals carry with them the spectre of added hours of work in addition to the course work or virtually "unwanted" help in cases in which a student is told he must concurrently enroll in ALS to be allowed to continue with his regular course work, the lab student's motivation may be low. This fact is reflected in the ALS attrition rate. Of all credit students enrolled for the 1976-77 academic year, 60.4% completed their work with quality grades. Of those non-credit students enrolled, 60.9% completed with an evaluation of Satisfactory.

However, despite the seemingly high attrition rate in ALS, one must consider the nature of this population--primarily low-skilled, poorly motivated and/or discouraged individuals. Furthermore, one aspect of enrollment which is not evident is the significant number of students who return to the Lab at a later time and complete their work successfully despite their previous failures. The concept of the Learning Lab does work. It provides a "safe" environment for trying out new skills and reclaiming forgotten ones. It enables students to receive effective

study strategies for problem courses. It provides individualized, supportive help to a degree which is just not possible in a regular classroom setting, no matter how dedicated the instructor may be. It teaches students to face and deal with personal and social problems which prohibit efficient learning. It allows for flexibility in scheduling for those who must combine work, school, and family commitments. Yes, learning centers such as the Parkland Learning Lab are viable and necessary vehicles to help meet the challenge of serving the educational needs of the diverse community college population.

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READING FOR ADULTS
AN L.R.C. PERSPECTIVE

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ABSTRACT

The paper discusses the suitability of functioning an adult reading program through a learning resources center. The positive contributions such a program can make for the life long learner are discussed with the program at Michigan State University as the model.

H. M. Nason (3) states that in a world that bombards with word and image, people need the will as well as the wisdom to read--because it is through continuing, selective reading that the individual and society can continue to learn and so maintain the right to be self-determining. We know however, that reality is much different from theory, and while we would hope that those whom we feel are our adult readers, would wish to read, continue to learn and thus be self-determining, we have many adults whose reading ability is such that they cannot be either effective readers or consumers of learning. Instead the printed page may be nothing more than a source of failure for them.

The adult who feels a sense of inadequacy with regards to reading skills is often very reluctant to seek help. There may be a lack of funds, family

problems or just simply that they don't wish anyone to know that they feel a lack. For these reasons the adult who seeks reading improvement will look for a program that is practical, supportive, not too expensive and held in a comfortable physical setting. (3) The learning environment that can provide all these criteria is the self-pacing flexibility of a learning resources center.

Learning resources centers are intended to be non-threatening learning environments which some feel may be the key to successful adult programs (2) and should provide individualized learning experiences for the student. The Learning Resources Center at Michigan State University tries to be such a learning center. Its primary function is to provide support and adjunct learning materials for the students and faculty of MSU's University College. We have, however, for the past four years provided a reading improvement program for adults in the greater Lansing--East Lansing community.

When we developed our program for the adult learner we felt that the auto-tutorial aspect of the Center was particularly well suited to fulfill the needs of the life-long student. The self-pacing program materials would permit the adult to function without peer value judgements and permit the learner to move at his/her own rate in a non-threatening environment (5). Additionally, the technology we used would be highly motivating and adults would enjoy using such things as speed machines. Robert Smith states that technology is a powerful yeast working in

education today and will probably become even more potent in the decades ahead (5).

Since the program's inception in 1973 we have had 12 to 15 adults each term enroll in our "Laboratory in Reading and Learning Skills For Adults". Our students have tended to be at the intermediate or developmental stages of reading (4). That is they are able to read fairly well but not at a sophisticated level. Thus, most of our students work on reading comprehension, vocabulary building, some speed and even spelling. About half of our students are hoping to re-enter college, thus study skill strategies and test-taking strategies are also included in the programming.

The adults in our program tend to be very self-directed and we have structured our materials so that they are multi-leveled. The material that is best suited for the learner is decided by a one to one conversation between the student and mentor. Diagnostic testing is avoided unless specifically requested by the student.

The self-pacing materials and the supportive environment of a learning center is probably one of the most suitable learning arenas for the adult learner. Nothing so disturbs the adult as the nagging fear that he/she will not be able to learn and nothing is more reassuring that the discovery that he/she can succeed (6).

Any college or university reading program that functions through a learning resources center can become an excellent

learning resource for the life-long learner.

Our experience has been most positive, and I would encourage those of you who have the facilities to consider the development of a life-long learning component to your college reading center.

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THE USE OF VIDEO TAPE TO REACH CRITERION PERFORMANCE: A Self-Shaping Teacher Training Procedure

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ABSTRACT

This presentation demonstrated the use of videotape as immediate feedback to modify teaching behaviors. The objective was to arrange a confrontation that was focused, facilitative, and non-threatening. This was achieved by allowing the teacher trainees the choice of viewing the tape either alone or with a supervisor.

Viewing the tapes had a positive influence on the trainees' subsequent teaching behavior. In addition, previous studies were extended by having the subjects filmed through a one-way window, by having the subjects teach without prior viewing of effective teacher behavior and by having the subjects observe and measure their own "on task" and "off task" behavior. On and off task was defined by a list of activities.

The use of videotaping, microteaching and self-confrontation in producing behavioral changes in teacher trainees has been evaluated in a number of studies (McDonald, 1973). Many different approaches to achieve behavioral changes have been examined and many of them have

been used with moderate success. Reviews of research on the use of videotaping as a means of feedback have been presented by McDonald and Allen (1967) and more recently by McDonald (1973). Studies have revealed that consistent behavioral change in teachers results from training procedures employing self-viewing of videotapes. Furthermore, feedback appears to be most effective with easily observed and reinforceable teaching behaviors.

A summary of previous literature, relating to teacher-training techniques and "self-confrontation," covering the years 1958-1972 by Fuller and Manning (1973) indicates that the confrontation should be focused and facilitative. Confrontation which was not accompanied by some focus may be provided by another person, by instruction, or even by the goal implicit in the situation. In some instances, it was found that the content of the focus might influence the outcome of the confrontation in the sense that what is focused upon is what is changed.

Additional studies indicate that optimal conditions for change include: a typical (rather than unusual) performance situation, a psychologically safe playback situation, and an unambiguous feedback system. Ramsey (1969) also concluded that reading teachers may profit from viewing video tapes of the reading sessions they have conducted. The influence of viewing the tapes on their subsequent teaching behavior was substantial. This study extends the prior work by defining "focus" as "on task" behavior of teachers.

Setting. The University of Michigan Reading and Learning Skills Center,

elementary and secondary program, has approximately 100 clients referred per year. Although, the clients referred to the Center range in age from 5 to 50 years, the majority are between 7 and 16 years. These clients, referred by classroom teachers, school specialists, or parents, have difficulty in mastering the basic skills necessary for learning to read or the skills necessary for writing, spelling, study skills or self-management. Graduate students who constitute the staff are all certified teachers enrolled in a three month practicum in diagnosing and prescribing for reading and study deficits. The course requires a nine-week teaching experience including diagnostic evaluations, program planning and instructional design.

This operation provided an opportunity to determine the usefulness of feedback via videotape on teacher clinical behavior.

DESCRIPTION OF STUDY

The behaviors of reading and learning disability teachers were to be modified by using videotaping as a source of visual feedback. This study differs from previous ones in several ways. Filming was done through a one-way window, eliminating the possibility of disrupting the classroom. The subjects were not given a model of effective teacher behavior prior to their teaching sessions. They observed and measured their own "on-task" and "off-task" behavior while viewing the previously taped sessions. On-and off-task was defined by a list of activities. (Figure 1)

Over 1500 articles in the literature

Name: Date:

Label each one as either an "On-Task" or "Off-Task" behavior.

	KEY
Reviewing students' work	_____(on)
Reading or writing for personal use	_____(on)
Responding to irrelevant behavior	_____(off)
Ignoring irrelevant behavior	_____(on)
Listening to (Doing an Oral Reading Exercise)	_____(on)
Hovering over student who is on or off task	_____(off)
Doing nothing	_____(off)
Waiting for student to complete task	_____(off)
Indirect observation of student performance (less than 1 minute)	_____(on)
Writing lesson plans	_____(on)
Fixing nails	_____(off)
Supplying word in an oral reading exercise before student asks	_____(off)
Failure to enforce a rule	_____(off)
Answering relevant questions	_____(on)
Reinforcing desirable behavior	_____(on)
Direct observation of student performance (more than 1 minute)	_____(off)
Answering irrelevant questions	_____(off)
Enforcing a rule	_____(on)

Figure 1. "On-Task and Off-Task" teacher Behavior Checklist used as a standard of relevant teaching behaviors.

identify, describe or define approximately 500 teaching behaviors. Commonly occurring or disruptive behaviors were identified and constitute a definition of "off-task" teacher behaviors. Facilitative behaviors constitute "on-task." (Figure1) These behaviors were selected arbitrarily.

SUBJECTS

The subjects were seven certified teachers completing graduate programs involving a practicum experience in diagnosing reading deficits and in prescribing behavioral objectives and instructional design. Two of the subjects had only pre-teaching experience. The study also included fifteen clients, five girls and ten boys who were referred to the Reading and Learning Skills Center by parents, public or parochial schools. The average age of the clients was 9 years. The videotapings were conducted by the investigators.

PROCEDURE

Initial testing was begun the third week of the instructional program. Permission was obtained, prior to filming, from the teachers and the parents of the clients, asking them to participate in a pilot study of videotape feedback. The purpose was described as modifying teacher behavior and modeling appropriate attending behavior for the clients. All of the teachers and clients agreed to participate.

Three measures were used. First, a pre and post survey was designed which measured the teachers' feelings and attitudes about being filmed and their

opinions as to the value of the project. They expressed their views on a scale of 1-5 ranging from "apprehensive" to "enthusiastic" for feelings and attitudes about being filmed and from "useless" to "very helpful" for their opinions about the value of the project.

The second measure was the "On-Task and Off-Task" teacher behavior checklist on which the teacher identified tasks as appropriate or inappropriate behavior. This, then, became the criterion for "On and Off-Task" behavior when viewing their own films.

The third measure was a 10 minute tally sheet (Figure 2) on which the teacher recorded his "On-Task or "Off-Task" behavior at 10 second intervals. The "On and Off-Task" Teacher Behavior Checklist and the pre and post survey were designed for use in this study. The 10 minute tally sheet was an adaptation of a form used as part of a classroom competency in Classroom Management. (Designed by Geraldine Markel)

Method. The filming procedure was explained to the teachers in order to eliminate some of the apprehension or anxiety about being filmed. It was described as a course requirement. At that time, permission to be filmed was obtained and the teachers were asked to fill out the pre-survey.

The teachers were then informed when they would be filmed for a pretest. A chart, indicating filming and viewing times, was then posted. The teachers were informed that they must view their pretest film before more filming could be done.

Observer_____ Type of Class_____ Age_____

Site_____ Teacher_____ Activity_____

Date_____ Number of Teachers_____ Others_____

OBSERVATION FORM

	10"		20"		30"		40"		50"		60"		Totals	
	T	NT	T	NT	T	NT	T	NT	T	NT	T	NT	T	NT
1st. min.														
2nd. min.														
3rd. min.														
4th. min.														
5th. min.														
6th. min.														
7th. min.														
8th. min.														
9th. min.														
10th. min.														

Task Behaviors _____ Non-Task Behavior _____ Comments _____

_____ _____ _____

Describe the atmosphere in the classroom and reasons for your impressions.

_____

Name_____

Figure 2. Tally Sheet for Evaluating Videotaped Teaching Behaviors.

Each teacher viewed a 10 minute segment of his film twice. The first showing allowed the teacher to observe the general activity in the classroom. For some teachers, it was an initial exposure to being filmed and the first showing dispensed with any feelings of excitement or embarrassment. Prior to the second showing, the teachers were given the "On and Off-Task" behavior checklist to measure their knowledge of appropriate and inappropriate behaviors. After checking their answers with the answer key provided, the teachers used the checklist as a guideline for the second showing of their film. The focus of the second showing was to observe only the teacher's "On and Off-Task" behavior and to record the results.

In order to eliminate the problem of watching a stop clock and a television monitor simultaneously, a cassette tape gave a time signal every 10 seconds for 10 minutes. During the total viewing time, there was no instructor verbalization unless the teacher specifically requested it. In addition, a supervisor and several Reading and Learning Skills Center personnel viewed the same 10 minute segments in order to tabulate their evaluation of the teachers' performances.

The experimental group consisted of five teachers who had continued filmings. Each filming followed the same procedure: two showings of the 10 minute segment, required viewing prior to additional filming, and optional instructor participation.

A control group, consisting of two teachers chosen randomly, had pre and posttest filming only. After all posttest

filmings and viewings were completed, the seven teachers were given the post-survey, asking the identical questions as the pre-survey.

RESULTS

The results of the survey on personal feelings and attitudes about videotaping (Table 1) indicated that the control teachers were essentially "neutral" on both the pre and post-survey. (3.91 and 3.41) The experimental group were "neutral" (3.65) in their feelings and attitudes on the pre-survey and "enthusiastic" (4.20) in their post-survey. In the latter group, the apprehension expressed centered around self-perception (viewing oneself as others really see you) rather than apprehension centered around an observer's perception.

A comparison of responses of the control and experimental group to the presence of videotaping as an interfering factor in their performance was included in the survey. It was found that, in both the pre and post-survey, the control group believed that videotaping would not hinder their performance. The experimental group indicated a "neutral" feeling in the pre-survey. The post-survey results indicated that 96 percent of the subjects agreed that videotaping was not a hindrance to their performance.

The results of the "On-Task" and "Off-Task" behavior Checklist (Table 2) showed that the control group scored 100% accuracy in labeling behaviors appropriately while the experimental group averaged 91%. Of the eighteen items on the

Table 1.

Pre-Post Results

C. = Control Group
E. = Experimental Group

	(apprehensive) 1	2	(neutral) 3	4	(enthusiastic) 5
I. Personal Feelings/Attitudes	C.(Pre)	C.(Post)	E.(Pre)	E.(Post)	
1. How do you feel about being videotaped?	4.0	3.5	3.8	4.2	
2. How do you feel about seeing yourself on tape?	4.0	3.5	3.6	4.4	
3. How do you feel about hearing yourself on tape?	4.0	3.5	2.8	3.2	
4. How do you feel about viewing the tape alone, without your supervisor seeing it?	2.5	3.0	3.5	4.2	
5. How do you feel about having a supervisor reviewing the tape with you at your request?	4.5	3.5	4.0	4.6	
6. How do you feel about viewing the tape with your supervisor?	4.5	3.5	4.2	4.6	
Average	(3.91)	(3.41)	(3.65)	(4.20)	
	(absolutely) 1	2	(neutral) 3	4	(not at all) 5
7. Do you feel the taping will prevent you as a teacher from giving a more natural presentation?	5.0	5.0	3.4	4.8	

Table 1. (cont.)

Post Survey Results

C. = Control Group
E. = Experimental Group

II. Opinions About Value of Project	(useless) 1	2	(neutral) 3	4	(very helpful) 5
		C.(Post)		E.(Post)	
1. Was the staff's preparation for the taping adequate?		3.9		4.2	
2. How do you feel about evaluating your performance via videotape recording?		3.0		4.6	
3. Was the tape an adequate and helpful means of feedback?		3.0		4.6	
4. Was the video taping helpful in modification of your behavior?		2.5		4.8	
5. How do you feel about this task-non task criterion for evaluating your effectiveness?		3.0		3.8	
6. (Optional) Was the supervisor helpful in reviewing the tape with you?		3.0		4.3	
7. How do you feel about continuing the videotaping program for future 592 students?		3.0		4.8	
	Average	3.00		4.44	

Table 2.

Measurement of the Percentage of "On-Off Task" Teacher Behavior

CONTROL GROUP

Subjects (Supervisors)	Pretest			Posttest	
	On	Off		On	Off
A	100% (72%)	0% (28%)		100% (100%)	0% (0%)
B	91% (85%)	9% (15%)		100% (100%)	0% (0%)

EXPERIMENTAL GROUP

Subjects (Supervisors)	Pretest			Interim			Posttest	
	On	Off		On	Off		On	Off
A	95% (95%)	5% (5%)		98% (98%)	2% (2%)		100% (100%)	0% (0%)
B	55% (55%)	45% (45%)		93% (92%)	7% (8%)		88% (100%)	12% (0%)
C	98% (98%)	2% (2%)		96% (96%)	4% (4%)		100% (100%)	0% (0%)
D	85% (85%)	15% (15%)		92% (88%)	8% (12%)		98% (98%)	2% (2%)
E	100% (83%)	0% (17%)		99% (88%)	1% (12%)		97% (100%)	3% (0%)

checklist, the only one that was missed by more than one subject was item #7 which read "doing nothing." In distinguishing between "On-Task" and "Off-Task" items on the checklist, the experimental group had made only one error in identifying an "On-Task" behavior while five "Off-Task" items were misidentified.

The results of the "On-Task and "Off-Task" Tally Sheet (Table 2) indicated that the control group found themselves "On-Task" 95.5% of the time and "Off-Task" 4.5% when viewing their pretest films. The same subjects found themselves performing "On-Task" 100% of the time in their posttest films. The experimental group found themselves "On-Task" 86.6% of the time and "Off-Task" 13.4% in their pretest films. In their posttest films, they found themselves "On-Task" 96.6% of the time and "Off-Task" 3.4%.

Supervisory personnel had slightly different results in their tabulations. According to their findings, the control group was "On-Task" only 78.5% of the time in pretest films and "Off-Task" 21.5%. The supervisory personnel did agree that they were "On-Task" 100% in the posttest films. The experimental group was "On-Task" 83.2% of the time in pretest films and "Off-Task" 16.8%. In the posttest films, they were "On-Task" 99.6% of the time and "Off-Task" .4%.

SUMMARY

This paper describes the use of videotape as a form of immediate feedback to modify teaching behavior. The subjects involved in the study reported that

videotaping was very beneficial both in creating awareness of interactions within the classroom and in modification of their "On-Task" behavior.

The identification of appropriate and inappropriate behaviors produced several observations. First, attending to "On-and Off-Task" behavior led one subject to comment that the teacher's own behavior can interfere with the client's learning ability, often creating a non-productive student. Next, experienced subjects were more aware of appropriate teacher behavior, although they did not put them into practice in the classroom. Lastly, those subjects (in the experimental group) who misidentified the "Off-Task" behavior of "doing nothing" on the behavior checklist were the same teachers who had "sat and stared at" the clients on the pretest films.

It was further noted that a discrepancy between the observations of the subjects with prior teaching experience and the observations of the supervisor's on the ten minute tally sheet was much wider than between the observations of the non-experienced subjects and the supervisor's.

It is concluded that a more extensive study of the use of videotape feedback is warranted, based on these essentially positive preliminary findings.

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TRAINING TUTORS TO TEACH STUDENTS READING STRATEGIES IN THE CONTENT AREAS

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ABSTRACT

It has become widely recognized that college students are expected to learn and to master course material via textbooks that are not only 2-4 grade levels above their own independent reading levels but are badly written as well. This predicament is compounded for the kinds of students we serve in Upward Bound and Special Programs. At Oakland, I have attempted to alleviate the situation by training my tutors in the appropriate reading strategies and study skills for their particular disciplines so that they can in turn teach their students these strategies. The outcome of such training should be that the students (1) improve their study skills, (2) utilize their study time to maximum effectiveness and efficiency and (3) develop into independent learners. (The materials I use have been developed from the results of research in the areas of reading and learning theory and with the collaboration of interested Oakland faculty. The specific disciplines to be discussed are math, biology, physics, chemistry, and social sciences. The emphasis will be on handouts and discussion.)

The use of tutors to supplement traditional academic instruction has long been a feature of educational opportunity programs at all levels of education in the United States. In fact, these tutorial components have been acknowledged as a major factor contributing to student

success in these programs, primarily because of the one-to-one arrangement which seems to work best with students experiencing low self-esteem as well as academic difficulties, characteristics which plague the educationally and economically disadvantaged student. An interesting phenomena resulting from the existence of these tutorial services within the structure of colleges and universities has been that more and more of the traditional students have been utilizing these services.

To those of us supervising these programs, it has become increasingly apparent that both the traditional and nontraditional students share essentially the same difficulties in learning once on campus (poor academic preparation in high school being a given). Large classes, which make it impossible for an instructor to be accessible to all students, and instructors, who inadvertently impose additional hardships on students because they are generally untrained in learning theory and teaching methodology, as well as difficult and badly written textbooks are only a few of the reasons tutors are necessary. The students themselves, finding it difficult to read critically, to organize material (a prerequisite for learning it), and to discriminate between important ideas and supporting details, tend to resist the personal involvement necessary for success in a learning situation. Tutors, if judiciously selected and properly trained, can alleviate this situation to a certain extent. As the students' peers and as a manifestation of an outreach philosophy not often encountered in the traditional academic setting,

tutors appear to students less threatening and more readily accessible than instructors. If tutors are structured and disciplined in their own study habits, yet enthusiastic about their subject area and flexible and sensitive to individual needs, they can not only instruct, but serve as effective role models as well, encouraging and persuading their students that they too can succeed.

When I first began supervising a tutorial component as part of an educational opportunity program for college level students, it became very apparent to me that though students asked for a tutor because they were experiencing difficulty with course content, in most cases, they could not understand the material because they could not get at it. In other words, they simply could not read the textbook with the degree of comprehension necessary for mastery of the material. This was just as true for the student reading on the sixth grade level as the one reading on the tenth or eleventh grade level. Indeed, it is widely acknowledged that college students are expected to learn material from textbooks that are not only two to four grade levels above their own independent reading levels, but that are badly written as well. This predicament is compounded for the non-traditional student, already overburdened with too many skills deficiencies. While we can certainly hope that faculty will be sensitive enough to the situation to employ alternative teaching methods, it is unrealistic to assume that they will begin to select textbooks to match the reading levels of their students (though more and more publishing companies are moving in this direction).

Traditionally, the most realistic and practical method of dealing with this dilemma has been to teach students the appropriate reading strategies for the various kinds and levels of textbooks they are required to read, generally through a course. However, a reading course, whether credit or noncredit, is not always feasible, especially for those students in math, the sciences, and the allied health fields with tightly structured curricula. Moreover, it seems to be generally true that skills taught out of any specific context do not always carry over. So, out of necessity, it seems a good idea to train tutors in the appropriate reading strategies and study skills for their particular disciplines so that they could in turn show their students how to use them. The necessity for immediate application of these strategies and skills--an ideal learning situation--means that students can actually improve their study skills, utilize their study time to maximum effectiveness, and most important, develop into independent learners.

Though reading strategies for the various disciplines involve the same basic steps--survey, question, read, recite, review (and all the variations thereof)--experience indicates that most students are not interested in a general application. They want assistance in an immediate situation and with specific material. The handouts I have developed have basically the same strategies, but they are addressed to specific disciplines--physics, chemistry, math, etc. Moreover, I have incorporated hints and suggestions supplied by faculty and tutors which makes these materials applicable and useful in

ways that commercially developed materials are not. It is also a relatively simple matter to utilize textbooks that are currently being used, especially in the introductory courses. At Oakland for example, one of the basic biology courses uses Helene Curtis' Biology (3rd edition), which provides summaries for each chapter. One tutor found that an effective study technique was to have the student read the chapter without reading the summary, write his own summary, and then compare it with the textbooks' summary. This suggestion, along with actual examples from the textbook, appears in a handout available to all students and instructors.

In addition to training tutors in reading strategies in their specific disciplines, I also emphasize techniques for mastering vocabulary. Since math and science courses are cumulative, that is, the understanding of one concept is built on an understanding of another, it is absolutely essential that the student learn concepts correctly and thoroughly as they are presented in the course. One important way to do this is through vocabulary because key terms in math and science often represent major concepts. Moreover, much of math and science terminology is so specialized (i.e. "molar" has a specific meaning in chemistry that it does not have in biology) that if students are not aware of the specific meaning of the term in the context of the discipline, their understanding of a crucial passage may be totally wrong. A large number of technical and scientific terms are based on a relatively small number of basic word elements, mostly Latin, Greek, and some cases German and French. If the

student can learn to analyze scientific terms, breaking them down into basic elements, he will be able to more easily learn and remember the terminology in his math and science courses. In addition to the usual lists of word roots, prefixes, and suffixes, I have developed lists of words from textbooks currently being used. Too often, vocabulary is studies out of any meaningful context, and most students simply do not have the motivation to improve their vocabulary if they cannot see any immediate benefits. This is especially true for students with genuine remediation problems or those who are educationally disadvantaged.

Though there are many excellent books on vocabulary and spelling available, only the most motivated students will seek them out and use them on their own. To remedy this situation, I developed lists of words based on textbooks the students were using. Though these lists are by no means comprehensive--and they should not be--they give a student a quick look at the vocabulary he will be faced with in a particular subject. Lists like these, though appearing formidable at first, can be used in several ways by the student and the tutor depending on the needs of the student:

1. Pronunciation: Becoming familiar with hearing the words will help the student in class during lecture and in the tutoring sessions.

2. Derivation: The student can see (or be shown) at a glance that many of the words are derived from the same roots and that the list is not so formidable after all.

3. Specific Meanings: The student

is made aware that many words he uses in his general vocabulary have specific meanings in science and math.

4. General/Professional Vocabulary: If math or science is the student's major field of study, these words will have to become a permanent part of his vocabulary. Selective lists, a structured alternative to vocabulary scattered throughout a 500 page textbook or clustered in a formidable glossary, are conducive to this acquisition. An attractive side benefit is that the student's general vocabulary will improve as well.

In summary, the role of a tutor can be broadened considerably beyond that of a teaching assistant to supplement course instruction, in most cases a short range situation. If tutors can be trained to show their students study skills and strategies as well as assisting them in their course work, then the tutorial experience becomes a long range situation, that is, the students learn how to learn, thus becoming more efficient and independent learners.

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USING LOW COST MICRO-COMPUTERS TO TRAIN SECONDARY TEACHERS IN READING

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ABSTRACT

A rationale and course outline for training pre-service secondary teachers in reading and reading diagnosis to fulfill Indiana mandated requirements was presented. The course as projected involves substantial use of low-cost micro-computers. The micro-computers are to be used to present tutorial computer-assisted instruction and simulation experiences. A sample tutorial on the cloze procedure was demonstrated on a micro-computer which incorporated an eight color display. A variety of micro-computers ranging from $400 to $4000 was described and contrasted. The advantages of using a micro-computer include 1) low capital acquisition cost, 2) low operational cost and 3) stand alone capability, allowing operation independently of a larger computer system.

By state mandate all college and university students in the state of Indiana who enter secondary teacher education programs after August 1, 1978, are required to take a three semester hour course on reading instruction. The purpose of this course is to "develop understanding of reading problems encountered by secondary students in subject-matter oriented materials."

At Purdue University, it is the intention of the Director of Teacher Education that the new state certification standard be implemented by September of 1977. This means that students in secondary education who enter as freshmen in

1977 will be required to take the secondary reading course sometime during their sixth, seventh, or eighth semesters. It is anticipated that beginning with the spring semester of 1970 that the course will have to be offered each semester and that by 1980 the enrollment will reach approximately 400 students per semester.

It is not anticipated that new staff will be added to teach this course. Consequently, present faculty members in reading will staff this course. Because computer assisted instruction lessons can be used for effective tutoring and because of the need to avoid a potential staff overload, faculty members in reading have opted for a course that would include the following:

1. large-group lectures staffed by a reading specialist,
2. weekly discussion groups staffed by content area specialists, and
3. computer-assisted instruction for a major portion of the course content.

It is the third item, the computer-assisted component of the instruction, which promises to provide the greatest potential for instruction. It should be possible to provide highly individualized interactive tutoring not possible through move conventional large course arrangements. This proposal attempts to develop a plan for the computer-assisted component of a secondary reading course to be taught at Purdue University.

The emphasis on computer-assisted instruction is attractive for a variety of reasons. There are three types of tasks for which computers can be used in

instructional settings. These are: 1) Data collection (e.g. automatic test administration, scoring and record keeping), 2) Simulation (e.g. presenting case studies for student analysis), 3) Programmatic (tutorial) instruction (e.g. presenting content for various course topics). Use of the computer to store records of student teacher performance can assist in evaluating the amount of information learned as well as the need for review or further learning. Testing can be computerized and administered at appropriate times during the course.

Simulation of experiences with children provides several features not available with "hand on" or field experiences. First, the student teachers will be provided with designed rather than random or accidental sets of experiences based upon hypothetical students. (Second, inexperienced student teachers in this course will not be able to do any harm to the hypothetical students they encounter in the simulations. They will be able to deal more effectively with classroom problems after encountering them in simulation. Third, other types of assignments can be simulated. For each set of experiences, the student teacher's solution can be evaluated. Those solutions that are educationally inappropriate or undesirable can be corrected. Consequently the student teachers will be able to deal with similar problems more effectively when they are encountered in the classroom.

An example of such assignments might involve the evaluation of readability levels of books to be used by hypothetical students. Selected text passages could be

presented with information about a particular hypothetical student. The student teachers would assess the level of difficulty and judge the appropriateness for hypothetical students.

In addition to computerized testing and record keeping for student teachers enrolled in the course, the computer can be used to simulate the testing of hypothetical students. Student teachers could interrogate the computer with test items, receive answers and be required to evaluate the results.

A course outline was developed around topics relevant to undergraduate needs in secondary reading. The topics were characterized by the mode of presentation that was deemed most appropriate. In the course outline that follows, topics are listed, approximate time is allotted, and the mode of presentation is indicated. Three modes are involved: programmed instruction (PI), computer simulation of activites (S) and conventional lecture (L).

Topical Content Outline for
Education 336

Reading in Middle and Secondary Schools: Methods and Problems

PI = programmed instruction
L = lecture
S = simulation

I. Differentiation of reading instruction, pupil needs and attitudes (1 week)

(L) A. Between adolescents and younger children
(PI) B. Word recognition, decoding, and phonics
(PI) C. Comprehension, context clues, predictive expectancies and reasoning
(PI/L) D. Learning rates and motivation

II. Identification of roles of teachers (1/2 week)

(L) A. Reading specialists, classroom teachers and school administrators
(L) B. Making reading programs coherent, effective, and innovative
(L) C. Communication with parents

III. Identification of component subskills and sequencing of instruction in reading (1 1/2 weeks)

(PI) A. Word analysis skills
(PI) B. Comprehension skills
  (1) Implicit vs explicit information
  (2) Textual vs. scriptal information
  (3) Questioning strategies
(PI/L) C. Study skills
  (1) Outlining skills
  (2) Dictionary skills
  (3) Using adjunct aids, study guidws, and advance organizers

IV. Identification of non-educational factors affecting reading (1 1/2 weeks)

(PI/L) A. Physical characteristics
  (1) Vision and hearing
  (2) General physical health
(L) B. Social variables
  (1) Parental and/or peer pressure
  (2) Socio-economic status
  (3) Home environment

V. Presentation of techniques for evaluation

(PI) A. Classroom screening
  (1) Informal inventories
  (2) Oral/silent reading
  (3) Miscue analysis
(PI/L) B. Formal testing (2 weeks)
  (1) Achievement vs. diagnostic
  (2) Norm- vs. criterion-reference
  (3) Group vs. individual
(PI/L) C. Other information
  (1) Cumulative records
  (2) Classroom observation
  (3) Confidentiality
(L/S) D. Using and interpreting the results of evaluations
  (1) Instructional decisions
  (2) Referrals to specialists

VI. Identification of methods and materials for classroom instruction (3 weeks)

(PI/L/S) A. Individualizing instruction
- (1) Skill sequencing
- (2) Evaluation
- (3) Record keeping

(PI/L) B. Word recognition and decoding skills
- (1) Evaluation

(PI/L) C. Developing comprehension skills
- (1) Schemas
- (2) Directed reading-thinking activities
- (3) Implicit/explicit-textual/scriptal information

(PI/L) D. Developing vocabulary
- (1) Affixes
- (2) Root words
- (3) Dictionary usage
- (4) Jargon

(L/S) E. Making assignments
- (1) Setting goals
- (2) Motivating students

(L/S/PI) F. Selecting materials
- (1) Interest
- (2) Appropriateness

(PI/S/L) G. Readability
- (1) Calculation
- (2) Utility

(L) H. Content areas
- (1) English
- (2) Mathematics
- (3) Biology
- (4) Social studies
- (5) Etc.

VII. Identification of reading problems (3 weeks)

(L/S/PI) A. Use of test information
- (1) Cumulative
- (2) Informal

(L) B. Rate deficiencies

(PI/S/L) C. Comprehension skill deficiencies

(PI/S/L) D. Study skill deficiencies

(L/S) E. Word analysis skill deficiencies

(L/S) F. Physical, psychological or social problems

(PI/S) G. Language deficiencies or differences

VIII. Identification of remedial strategies (2 weeks)

(S/PI) A. Use of test scores
(L/S) B. Referrals to specialists
(L) C. Technological aids
(L/S) D. Language experience
(L/S) E. Cloze procedure
(L) F. Second language techniques
(L) G. Motivation and interest
(L/S/PI) H. Specific skill remediation

IX. Organizing a total school reading program (1 week)

(PI/S/L) A. Developmental
(1) Reading center
(2) Developmental reading teachers
(3) Role of librarian
(4) Classroom content reading
(L) B. Remedial
(1) Reading Clinic
(2) Special services
(3) Reading specialist/consultant

X. Identifying supplemental services

(L/PI) A. Special education classes
(L/PI) B. Counselling
(1) Psychological
(2) Vocational
(L/PI) C. Physical abilities
(1) Speech/hearing specialists
(2) Vision specialists

The applicability of computer-assisted instruction to teaching major portions of a course has been restricted by three major problems.

The first is the cost. Costs can be analyzed as capitalization costs and operational costs. These costs involve equipment purchase, telephone line charges or rental, "port" hookup charges, computing charges and lesson storage charges. These are costs which typically occur when one uses a "time shared" system or service. The costs tend to range from about $1 to $8 per terminal hour. The average charges will tend to be around $5 per terminal hour.

The second problem concerns the availability of computer-assisted instruction languages which are easy to use yet powerful enough to be useful. CAI languages have tended to be highly machine or manufacturer dependent--that is, a given language may often be available only on one brand of computer or even one model of one brand. There are currently over 30 CAI languages in existence but there is only one relatively machine independent language (PLANIT). A general purpose computing language could be used but only one or two (BASIC and APL) are easy enough for a computer novice to learn to use to create CAI lessons.

The third problem concerns the portability of CAI lessons from one CAI language to another. Typically a lesson written in one CAI language would have to be rewritten substantially to be usable in another CAI language. There are some differences in the BASIC languages available for the different computers. Lessons written in BASIC or APL however generally require minor revisions to be usable.

The PLATO IV system for computer-assisted instruction (and its language TUTOR) has been highly publicized as a low cost CAI system. Costs per terminal hour have been projected variously between $.50/hr. and $1.50/hr. These costs are derived from a purchase cost of approximately $5400, an annual computation charge of approximately $2100 and the telephone line charges or rental. First year costs can range from about $7800 to $9000 with subsequent yearly costs of about $2400 to $3500. These costs typically do not reflect maintenance costs.

While the costs of the PLATO IV CAI system are low, they are based on cost averaging over a 5 year period. The actualities are such that a school is often faced with the problem of capital purchase in one year rather than over a 5 year period and that of course constitutes a real problem.

The appearance of the low cost microcomputer on the technological scene caused the investigators to speculate on their possible application to instruction. These micro-computers typically have a fairly expanded version of the language BASIC and an interesting array of accessories (called peripherals in the trade.) The micro-computers are often contained in a computer terminal and thus do not require the extra space needed by larger computers. The BASIC language may be in permanent memory (ROM-read only memory), on cassette tape, or on a "floppy disk" (a disk with surfaces like recording tape). The micro-computer usually contains changeable storage space for about 8000 characters with the ability to expand to about 32,000 or 64,000 characters. BASIC would be stored either on cassette tapes or "floppy" disks. Floppy disks are generally more desirable because programs can be moved from disk to main memory extremely rapidly (typically from 1 to 3 seconds). Total micro-computer acquisition costs range from about $595 to about $7500.

Table 1 summarizes characteristics of a few of the low-cost micro-computers which are currently available.

Purdue University provides a time-

TABLE 1

Micro-Computer	Changeable Memory*	Permanent Memory (Non-Changable)	Keyboard	Display	External Program Storage	Est. Price
Commodore Pet	4,000	Yes--Basic Language	Yes	Video, Black & White 16 Lines 32 Char./Line	cassette tape	$595
Radio Shack TRS-80	8,000	Yes-Basic Language	Yes	Video Black & White 16 Lines 64 Char./Line	cassette tape	$599
Compucolor 8001	8,000	Yes-Basic Language and an Operating System	Yes	Video 8 colors 48 lines 80 Char./line	8 track cartridge accessory Floppy Disk Additional	$3,050 $2160

*Actual amount of memory is somewhat larger.

NOTE: 1) Radio Shack and Compucolor offer additional memory for extra cost.
2) Both commodore and Radio Shack have indicated that they will announce availability of more accessories including disks in 1st quarter 1978.

Title: Summary of characteristics of three available low-cost micro-computers.

Kamil-Frederick

sharing instructional computer (a Digital Equipment Corporation PDP 11/70) for use in support of course instruction. The PDP 11/70 will be used with this course. The investigators were also concerned with the question of using the instructional materials on a stand alone basis in micro-computers. An examination of Table I reveals that the COMPUCOLOR 8001 provides an interesting range of capability with an 8 color display and the ability to function as a regular computer terminal. The COMPUCOLOR also allows a limited graphics capability (about 192 x 160 dots). The investigators are presently examining the possibility of using the Radio Shack TRS-80 as an even more cost effective alternative. The demonstration lesson on the cloze procedure (as presented at the conference) was written in BASIC and operated on a stand-alone basis on a COMPUCOLOR 8001 micro-computer.

Based on previous projects involving the development of CAI materials, it was estimated that it would take about 3-10 hours to develop 1 hour of student lesson material. Translating the lessons into BASIC appears to take about 2-3 hours per 1 hour of student lesson material.

The advent of the low-cost micro-computer has resulted in the development of a number of new publications. These magazines deal with a variety of applications of micro-computers. If you wish to pursue the applications, a suggested list of relatively non-technical magazines would include ROM, Interface Age, Creative Computing, Peoples Computers and Personal Computing. These magazines are usually available in your local computer store or by subscription.

TEACHING READING IN THE ESL CLASSROOM

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ABSTRACT

The purpose behind this paper was to review the difficulties associated with the teaching and development of reading skills in a second language. It discusses the difficulty of assessing the student's level of efficiency in terms of reading and fluency in the native language and second language; as well as the variety of interferences associated with second language learning, some being in the areas of script interference, left to right progression, and cultural and educational (style and level) disadvantages.

In respect to these problems and the need for efficient reading for continued learning in a second language, this paper contains suggestions for curriculum changes and the refinement of materials directed towards the development of efficient second language reading skills.

In 1967, when Marshall Mcluhan and Quentin Fiore published the book entitled, The Medium is the Message, they introduced the concept of the world as a "global village," in order to clearly define the impact of the electronic media on the world as a network of societies. The immediacy of information brought about by the inventions of the twentieth century is indeed impressive; yet, it has to be taken a step further, in that there are no

longer any clearly defined language boundaries existing between countries and the language of science, technology and culture are rapidly becoming assimilated into every society. This global village, with its refugees and emerging nations, no longer is one where only the wealthy are afforded the opportunity to study abroad; and in turn, the term "abroad" is not limited in reference to Oxford or the Sorbonoe, but encompasses nearly every country of the globe. The classroom is no longer entitled to its private view of Standard American English in reference to dialect and regional differences; nor, does it contain uniformly native language speakers. Bilingual Education is a result of this global village, and as reading educators our task is complicated in a bilingual classroom by many of our preformulated conceptions of the reading experience in our culture.

For several years; I have taught in a secondary bilingual education program, mandated by the state and designed to offer both English language instruction and tutoring in the native language skills. In my situation the term bilingual is deceiving, in that at the present time I am working with eight different languages and cultures and find the task of reading instruction in this global village to be frustrated by my formalized conceptions of my native language; the way it is written, read, and spoken. A phrase as familiar as "I could stand to sit down," reveals a notion of the variety of incongruities in our language. Such expressions are highly confusing for the second language learner to comprehend orally and become more difficult when the student reads by translation.

Susan Herbert

The primary difficulty in reading or language instruction in the ESL classroom lies in determining the level of language ability. A tool which is useful for determining a basic listening and reading comprehension level is the Lado Test of Aural Comprehension. It is comprised of three forms of multiple choice questions and possesses adequate reliability in a test-retest situation; it also lends itself well to a follow-up test for evaluating improvement. The test itself is short and not given to unreasonable time limitations, nor is it culturally dominated by items which are not universal; however, Lado has constructed the test items through a comparative analysis of linguistic items which tend to present special difficulties for the foreign student. And while it has been appraised in the M.M.Y. as being useful in judging the ability of foreign students to study in the English language, it can at best be used to determine only a very generalized idea of reading mastery.

It is equally difficult to derive a satisfactory measure of reading competence in the bilingual student because the available tests are either too narrow or broad in content. One can evaluate a high-achieving native speaker in terms of a standardized test and safely assume that the results indicate an efficient reading performance outside of the classroom, but to assume the same thing about the bilingual student is risky. Few of the bilingual students at the University have felt the TOEFL Test was an accurate measure of their ability to read standard English.

The purpose of the TOEFL Test is to

assess the level of proficiency in people whose native language is not English. It includes tests of listening comprehension, structure and written expression, and vocabulary and reading comprehension. The latter assesses the ability to understand various kinds of general reading material, however, it is not clearly related to the types of reading tasks associated with university level work and often suggests a proficiency which is not there.

Using a standard university level reading test, I have found that ESL students scored consistently lower than the norm of University of Illinois students (1972); however, a large portion of native speakers also failed to meet the average level on the test, cultural and educational factors not-withstanding. Tests of this sort can hardly be conclusive in diagnosis of the ESL reader.

In order to derive a clear picture of the ESL reader at the University level I reviewed responses to a reading survey I prepared. This survey simply asked students to order their priorities in terms of the developmental reading situation. The survey included items such as; speed, comprehension, concentration, vocabulary, study habits, study skills, skimming, summarizing, notetaking, outlining and test taking.

Essentially, the response of the second language reader ranked the areas of speed, comprehension, and vocabulary as the top three. They differed from the native speaker in their highlighting of vocabulary skills and low ordering of concentration strategies. The difference

is understandable, in that second language readers at the university level are highly motivated towards achievement and reading ability is the key to their academic success, whereas the native speaker tends to view reading as a task and ranks concentration as a higher priority.

Suspicion of standardized tests as adequate achievement measures or prediction instruments is justified on grounds of unreliability in measurement for ESL. They certainly do not simplify the task of developing materials and curricula to deal with the second language reader.

When developing a reading program for secondary students, initial assumptions can be made as to the general readiness of the student. One of these is the ability to recognize and differentiate the letters of the alphabet in print as well as cursive. In the bilingual classroom, there are students from cultures which use a script entirely alien to the American culture, and while our general style of print may be familiar to the student, printing in text materials vary in size and configuration and not be recognized by the ESL student. This is a simple recognition task taken for granted in the native speaker, but needs to be developed in the second language learner through special exercises.

Another skill which can be assumed is the custom of reading from left to right. Although this is not unique to the American culture and can be learned by students of different cultures rather easily, to students trained in reading in their own language, this is an

unnatural shift that requires time and practice to develop efficiently. Unfortunately, those cultures which require this type of readjustment almost always face additional problems in terms of phonemes and graphemes. Many of their languages do not contain tones or letter sounds similar to English; nor do they employ an alphabet which affords parallels. Such new processes must be developed in a context of interference with their native language patterns through strategies of pronunciation, reproduction and recognition before reading efficiency can be achieved.

As an added source of difficulty, several secondary students I have had occasion to teach in the last three years have tested out at extremely low literacy levels in their own native languages. Reading in a second language is next to impossible when the task in the native language has developmental limitations.

Educational opportunity, quality of instruction and curriculum content may further inhibit the ability to teach reading in the second language. To read in any language one must be able to deal with vocabulary in unlimited conceptualizations and contexts. A word used in humor is not funny unless its meaning on that level is acknowledged.

Many cultures emphasize rote memorization of materials and de-emphasize the need for the skills of understanding, reflection, application and abstraction. Such educational strategies, though perhaps effective in one culture, impedes second language reading in that it stresses literal translation. Unfortun-

ately, only rarely can meaningful translation be made of any language as idiomatic as English. The process of rote learning also denies the second language learner the experience of sensing the subtleties of meaning and assumptions employed by the contextual reader, and defies efficient higher level reading and comprehension.

A graduate student friend of mine from Hong Kong discussed this difficulty among friends of his culture, and described their concept of reading inefficiency as the inability to process language without writing it. They examined their educational backgrounds in English and found they relied almost entirely on transcribing grammar exercises and translating vocabulary. The process of reading and speaking was not emphasized, and they therefore found it difficult to use what they referred to as the English thinking process. For them reading English was a slow process of repeated regressions with frequent use of the dictionary and strenuous notetaking.

Interviewing another student from Viet Nam, I received a similar opinion of the handicap of reading college material in a second language. She, however, found using a native language dictionary a handicap and preferred using a standard English dictionary for help, but even went so far as to reject that as useful to understanding because she found her thought processes interrupted when referring to the dictionary and often found the dictionary definitions vague and unrelated to the context of a great deal of her reading. Her personal solution was to

read and re-read until the vocabulary made sense.

In reflecting upon such exchanges with bilingual students, I find another handicap--the lack of familiarity with content. The native speaker's comprehension tends to drop when reading material is unfamiliar, difficult or boring. The bilingual student is also confronted with these comprehension problems but references and allusions to commonly known cultural figures add further difficulties. A casual newspaper reference to a person in public life retaining the characteristics of Walter Mitty, allows a native speaker a great deal of information in a single metaphor. It relays nothing to the bilingual reader and only complicates the communication problem.

The reading instructor in the bilingual classroom must also compensate for the lack of adequate reading materials directed towards developing sound second language reading skills and reading texts which focus on developing written skills rather than the conceptual skills needed for reading comprehension. Bilingual reading texts are designed with comprehension questions which encourage rote learning and their almost total reliance on simple recall-type questions and fail to develop the ability to think in English.

An additional problem with materials prepared at graded levels of proficiency for the ESL student lies in their tone and attitude toward the reader. One reading which comes to mind relates the activities of a talking chimpanzee in a tone similar to that of a Weekly Reader used in the

primary grades. Such materials are hardly suited for the age level of the readers for whom they are intended. On the other hand, simply using materials written for the Standard English student creates a cultural short circuit in the bilingual student. Essentially the situation of the secondary ESL reading teacher resembles the phrase, "water, water everywhere, but not a drop to drink". Most schools contain considerable resources for developing reading ability in the native student but little of it is really suited to increase reading ability in the bilingual student. The major areas for materials are word recognition, vocabulary, word attack stragegies, speed development, and reflective comprehension questioning.

Word recognition and phrase meaning drills, originally designed to increase eye span and rapid eye movement, are useful for work with the bilingual reader in that the repeated, rapid recognition practice should increase the ability to read comprehensively, rather than translate. For the student with a script interference and/or left to right progression difficulties, this type of training proves to be helpful in promoting a natural reading process, not deciphering. Anagrams appeal to those people gifted with language ability provided the word is in the persons recognition vocabulary.

Vocabulary development can be a lackluster task for native speakers of English and may prove equally exasperating for the ESL student. While there is no way of escaping instances of dictionary work and memorization, this can be made more interesting by combining these efforts with structural lessons on word attack

strategies and pre-reading techniques. By word attack strategies, I am referring to the five basic clues inherent in reading material which promote contextual understanding, definition, experience, comparison or contrast, synonym and summary.

In conjunction with word attack skills, pre-reading or surveying must also be introduced and encouraged in an effort to alleviate some of the problems of cultural differences and contextual unfamiliarity. The need for bilingual students to acquaint themselves with key ideas before reading the entire text is crucial to comprehension. Through a thorough method of pre-reading, vocabulary blocks can be identified and a frame of reference for context meaning can be formulated. This also gives the student opportunity to become familiar with the syntax of the material.

Speed development is important for the foreign student both for the sake of efficient reading and as an aid to reading for concepts. Speed drills can provide incentive for modifying reading behavior, and yield profound results in comprehensions

The speeded reading exercises should include reflective comprehension questions. To be able to recall the name of a character in reading can be easily programmed into student behavior, but to determine whether the character reacted either violently or humorously is not an easy task for the students who limit their reading comprehension skills to recalling details. Pure recall questions associated with reading exercises can inhibit the development of the thought

process in the second language and allow the bilingual reader to develop a set of clues for details, rather than develop a conceptual reading strategy necessary for mature reading.

In reviewing these final suggestions for an ESL reading curriculum, I cannot help but see parallels among my American students' reading difficulties. which suggests that problems for the reading teacher in an ESL classroom are not that extraordinary, and perhaps it is the breadth and immediacy of this global village which confounds me. My personal experience in school is with a generation a time beyond the age of mass immigration to the United States; in a suburb of standard English and This is Our Valley readers, and all visions outside this community were experienced through the reading of books, which provided me questions, altered my viewpoints, and in a sense gave me an opportunity to feel a part of this global community. Perhaps the urgency that I now feel towards increasing these students second language reading abilities is highlighted by their high motivation to speak and be understood; to listen and to comprehend, and to read and discover.

THE USE OF THE CLOZE TECHNIQUE AS A SEMINAL COGNITIVE PROCESS

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ABSTRACT

Reading teachers are constantly searching for effective therapy approaches to help improve the reading proficiency of their clients and the cloze procedure is one of the most promising techniques at present. As words are deleted from prose passages, readers are forced to comprehend the material in order to supply the missing lexical items. The use of clozure as an aid to reading improvement as well as some controversial issues are described in this article.

In the constant search for approaches to reading instruction, approaches that will be effective in helping readers reach their potential, many viable processes have been attempted. One of the most promising of these is the cloze technique and the purpose here is to explain one successful use of the procedure in the hope that others can use, adapt, and improve upon the ideas proffered for consideration.

The Cloze Technique Defined

There are, (no doubt) various definitions of the cloze procedure but, however defined, the process is concerned with the systematic and selective deletion

of vocabulary from a prose passage. Perhaps the most widely accepted definition is that suggested by Wilson Taylor.

> .... a method of intercepting a message from a "transmitter" (writer or speaker), mutilating its language patterns by deleting parts, and so administering it to "receivers" (readers and listeners) that their attempts to make the patterns whole again potentially yield a considerable number of cloze units. (Taylor, 1953, p. 416).

The following example will serve to illustrate the nature of the cloze technique. Let us consider the following sentence: "Peter went to the _____ shop to have his hair cut." Context is a guide to helping the reader supply the missing word and he must read the entire sentence and understand its meaning in order to fill in the blank space. In this illustration the word "barber" is probably the only one that would be acceptable. Now we can take another look at that same sentence and see how the deletion of a different word adds flexibility to the process. "Peter went to the barber shop to have his hair _____." The reader could supply one of several words that fit and could be accepted. In addition to "cut" the reader might think of "washed", "styled", "trimmed", "dyed", and so on. So the position of the word deleted in the sentence is an important consideration in using clozure.

Another point to consider is that of the frequency of deletions. Some researchers recommend the rigid deletion of every fifth word and others believe that every tenth word should be left out. If

we consider the former and use Peter we have this: Peter went to the _____ shop to have his _____ cut. Reader response to this sentence could be as varied as the number of individuals attempting to read it. And how do we determine an acceptable response to that text? So the frequency of deletions is a controversy users of the cloze technique must consider as they use the process in corrective reading situations.

The use of initial consonant clues is another point needing mention. In our sentence "Peter went to the b_____ shop to have his hair cut," we can see that such usage is a great aid for the reader. One wonders if it may be too much assistance. Yet some readers need this guidance and users of the cloze technique should consider the initial consonants, blends, and digraphs as reader aids.

The Cognitive Process and Reading. Most writers in the field of reading believe that the major goals is for the reader to comprehend the printed passage. That is to say, the purpose of reading is to understand the author's message. There may be other related purposes (recreation and enjoyment, knowledge, diversion, etc.) Yet all of these do, indeed, involve comprehension.

To arrive at an understanding of the writer's message, the reader must be able to recognize and interpret known words as well as to attack unknown words through the use of appropriate skills. So a large sight vocabulary and a knowledge of decoding techniques are vital to reading and understanding, but they are merely

tools to be used as an aid in comprehension.

Moreover, the level of comprehension is of major concern. Although we may begin to teach comprehension at the lowest (factual) level, we should proceed to the higher levels as rapidly as possible. In working with our clients, we need to teach them how to read for various levels of cognition; knowledge, comprehension, application, analysis, synthesis, and evaluation so they will not only understand what the author has to say, but will be able to judge its worth.

The Cloze Technique as Method.

When one attempts to help the deficient reader who has potential for doing more, it becomes clear that the major reading problems tend to fall into three main and interrelated categories. (That is to say, the typical reading deficiencies seem to be (1) lack of vocabulary knowledge - (meanings and nuances), (2) failure to synthesize the ideas (failure to comprehend) represented by the printed symbols, and (3) inability to use word attack skills and/or unwillingness to use the dictionary. It is to these ends that an effective therapy program should be directed.

The use of the cloze technique has been highly successful in our therapy sessions with adults (young and old) as well as with some children. The typical therapy program is so structured that it includes teaching-learning experiences designed to overcome the deficiencies noted above.

The Lesson Outline Sequence contains provisions for activities that help readers learn more about vocabulary, more about comprehension, and more about the value of the dictionary. So there are these three phases to the lessons suggested for poor readers: (1) developing vocabulary skills, (2) developing comprehension skills, and (3) development decoding and dictionary skills.

Initially the deficient reader participates in vocabulary development activities and reads a prose selection after having learned the pertinent vocabulary to be encountered in it. Then comprehension questions are asked and responses recorded. Following this the reader attempts the same material rewritten in cloze format. The transcribed text is so structured that every tenth or twelfth word is missing. The client is to supply the original word and then mention other words which could fit the context.

To illustrate this, let us return to our original sentence about Peter:

Peter went to the barber shop to have his hair cut.

The student reads an extended prose passage (in this example it is just the one sentence) and answers questions designed to check comprehension. Then the student reads the transcribed passage:

Peter went to the barber shop to have his _____ cut. and supplies the missing word "hair." After that the student is asked to suggest other words that could fit (locks, moustache) in context.

The advantages of this technique are several:

1. The reader is forced to read for comprehension.
2. He is required to understand the text and think of related words that fit the context.
3. He learns to interpret the printed symbols in a structured and then in a flexible manner.
4. The process provides for guided success which helps improve the reader's self-image.

A Final Note. We have tried this experimental process with a limited number of adult readers and it has worked out exceptionally well. It is our hope that other experimenters will refine the process and let us know the results. There are many adults of limited reading capabilities, adults who really want to improve themselves. The cloze technique as a seminal cognitive process is one effective means to their achieving this goal.

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SPECIFIC PROCEDURES FOR READING RATE IMPROVEMENT

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ABSTRACT

Research indicates that with appropriate instruction post-elementary students can improve their reading rate. Research reports, however, usually fail to supply the specific details of procedures, materials and techniques by which such growth was achieved, so classroom teachers fail to benefit from the research. This lack of specificity also impedes further research because methods and procedures used cannot be effectively compared.

This paper reports on instructional procedures which have been found effective and identifies specific variables which merit further research.

There is considerable support from research that post-elementary students can improve rate given appropriate instruction. Carpenter and Jones (1975) cited twelve studies, conducted between 1965 and 1971, which showed positive gains. The research also indicates that students with an average rate of 250 to 300 words per minutes (WPM) can be expected to make about a 100 percent rate gain with sufficient comprehension (75 to 80 percent) (Carpenter and Jones, 1975).

A problem with reports of such research is that they usually fail to provide important details of the procedures used in the studies, such as the length and difficulty of materials, amount of practice, and precise procedures by which practice is done. As a result, teachers can not use the reports in designing their own instruction. They must rely on "methods" texts which may or may not be research-based.

The lack of specificity impedes further, meaningful research. It would be useful for example, to compare particular procedures already found to be effective to some extent in terms of their degree of effectiveness (e.g., size of gains, numbers of students who show gains). If two procedures prove equally effective, a comparison in terms of expense (teacher time and cost of materials) would be useful. Most studies apparently used a combination of procedures. Studies which control for a particular procedure would be useful, e.g., two groups following the same procedures but one self-checking comprehension, the other having teacher-checks.

Finally, an area which has received little attention is the effect of procedures on students of different ability. Previous studies have involved students whose pre-instruction rates fell within the average range according to means reported. The reports did not note the presence of students who were above or below average in rate nor the effects on them. Particular procedures may be more or less effective with such students than they are with the "average reader."

This article will present, in detail, a combination of procedures found to have some effectiveness. The procedures have been used in reading improvement and education courses at a major midwestern and major southwestern university. Some of the procedures and their underlying principles are presented in a teacher-training module (Wilhelm and Wolter, 1974). The primary purpose of the discussion is to identify specific conditions which may be investigated in further research.

Informal Pre-Assessment

Informal measures were used along with, and in place of, standardized tests. These measures were directly related to the practice. For example, students practiced by reading a 2000 word passage at the college level and answering ten multiple-choice questions calling for recall of main ideas and details. The pre-test consisted of a passage of the same length and difficulty and the same number and kinds of questions.

The "pre-test", then, is simply the first practice. It is a "pretest" because the students and teacher record and use the information on current student performance on the first and last practice provides a direct, objective measure of the students' achievement in that phase of instruction as well as of the effectiveness of the instruction. In addition, the pre-test provides a basis for setting individual objectives and providing positive, task-related feedback.

Individual Objectives

With the results of the pretest,

students can work toward a general, group objective (e.g., a 100% gain in rate) by setting and meeting individual objectives on each practice. One student might work toward a gain from 250 to 275 WPM; another a gain from 420 to 450 WPM. The act of setting objectives, in itself, may be a procedure which has an effect on achievement. Research provides some evidence that making positive predictions about reading achievement has a facilitative effect (Royer and Schumer, 1976).

Feedback

Beginning with the pretest and for each practice, students record information on a rate/comprehension graph. Such information may function as feedback, i.e., information that affects future performance. Research indicates that information has a facilitative effect when it is (1) positive (informs students of desirable or expected behaviors) and (2) directly related to the task, in this case WPM and percent of comprehension (Hall, Lund, and Jackson, 1968; Smith, Brethower and Cabot, 1969; Wilhelm, 1970; Wolter, 1975; Lamberg and Wolter, 1976).

Immediate Feedback

During the practice, the instructor records, on the board, the passing time in minutes and 10 second intervals. As soon as a selection is read, the student checks the board for the time he took to read. Using a rate-time conversion table, he checks his answers using an answer key. There is some evidence that the timing of feedback is an important variable, i.e., if delivered immediately (1) after the

performance or (2) before a subsequent performance (Wolter, 1975; Wilhelm, 1970).

Repeated Practice.

Students did the same exercise a number of times. Selections were different, but length and difficulty and number and kinds of questions remained constant. Repeating the practice is apparently necessary, so that information on each practice can be compared and progress can be seen (Samuels, 1977). There are two variables to be considered: (1) the effect of seeing progress and (2) the amount of repetition.

Pacing

The emphasis in the instruction reported here was on rate. Students would continue to practice at steadily increasing rates as long as 80% comprehension was maintained. If comprehension fell below 80%, students would hold at the highest rate and practice until comprehension "came up"

To aid students in making steady gains in rate, "pacing" was employed. Students were asked to determine the amount of time they would need to read a selection to meet their objective for an increase in rate. As they read, the instructor called out the passing time so that students could pace themselves. Other pacing exercises to develop skimming and scanning were used. (Mechanical and electric pacers were not used). The effect of pacing and of different means of pacing are variables to consider.

Attention to Comprehension

Though rate was emphasized, the goal of the instruction was a significant gain in rate with achievement of and/or maintenance of a desirable level of comprehension (75 to 80 percent). After students began pushing their rate, help with comprehension was provided with variations of SQ3R (Robinson, 1941) and cloze exercises. Some students seemed to be helped by the survey/question procedures. Others who were reading at a very high rate (well over 500 WPM) with good comprehension did not seem to need, or to benefit from, the method. Those students with comprehension scores below 70% on Trigg's Diagnostic Survey Test were found to make significant gains by completing a series of cloze exercises (Brethower, Galanti, and Wilhelm, 1969).

Evidence of Effectiveness

Three studies involved students who participated in a mini-course in reading improvement for part of their work in an undergraduate course in the teaching of secondary reading. Performance was measured in terms of "rate of comprehension," i.e., a multiple of rate in WPM times percent of comprehension (Miller, 1976).

Two groups of students (40 and 46) showed significant (positive) differences between pre and posttest performances, with six practices. For the first group, pre and posttest means were $\bar{x}$ = 287.80 vrs $\bar{x}$ = 369.58; for the second, $\bar{x}$ = 303.11 vrs. $\bar{x}$ = 490.41.

A third group of 74 also showed significant pre-post gains in six exercises

($\bar{x}$ = 283.31 vrs $\bar{x}$ = 361.82). A further analysis of data involved comparing performance of students within the group whose pretest rate was below average (below 250), average (250-316) and above average (above 316). There were significant gains for the first two groups but not for the third ($\bar{x}$ = 225.67 vrs $\bar{x}$ = 313.90; $\bar{x}$ = 280.69 vrs $\bar{x}$ = 374.69, and $\bar{x}$ = 373.76 vrs $\bar{x}$ = 396.88). (Lamberg, 1977)

A group of students enrolled in a non-credit six weeks reading improvement course offered by a reading and learning skills center used the same procedures in classes with different instructors.

They showed significant pre-post gains ($\bar{x}$ = 249.73 vrs $\bar{x}$ = 552.22). It should be noted that 20 of the original 81 students did not take the posttest. (Annual Report, 1976-1977).

Conclusion

Research and classroom practice involving the procedures discussed above suggest a number of variables to be examined in further research and to be considered in teaching: (1) making predictions for achievement, (2) positive feedback, (3) immediate feedback, (4) seeing progress, (5) repetition of practice, (6) pacing, (7) use of "survey" techniques, (8) uses of cloze exercises, (9) length and (10) difficulty of materials and (11) response to exercises by students of different ability.

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TEACHING VOCABULARY FOR MEMORY THROUGH WORD RELATIONSHIPS

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ABSTRACT

Because vocabulary growth is so important, teachers are always interested in effective approaches to vocabulary development. The problems of interest and meaning of words in vocabulary programs for academically disadvantaged college students are discussed in this paper. The basic assumptions of this approach are applied to a five-step approach which has proven affective in classroom experience.

That vocabulary growth is important is a fact recognized by virtually all educators. Not so easily recognized, however, are effective approaches to vocabulary development. Interest has been one problem; students have been understandably bored by learning definitions of lists of words. Memory of words taught is also a problem. Teaching words in such a way that a student's vocabulary will mushroom is indeed a challenge.

The authors developed their sequence of vocabulary skills in their work with academically disadvantaged college

students. The following assumptions are basic to their approach:

1. A direct approach is effective in teaching vocabulary.
2. Words are not learned in one exposure but rather over a period of time.
3. Words are best presented in sentence context.
4. Words are most effectively learned in relation to other words--the more such relationships, the better.
5. The various meanings of a multiple-meaning word should be taught. This approach has been used on the junior high and senior high levels, as well as in classes for adult basic education, English as a second language, and college reading programs.

The first step in learning a new word, according to Triggs, is to become aware of the word itself and aware of the fact that one does not know the word. Dale identifies four stages of familiarity with a word: (1) total ignorance of the word, (2) awareness of the word but ignorance of its meaning, (3) a general knowledge of the word, and (4) an accurate knowledge of the word. Familiarity with a word, then, comes not from a "one-shot exposure" to the word; addition of a new word to the student's writing and speaking vocabularies, as well as to his or her listening and reading vocabularies, takes place over a period of time. Methods of study, based on the principles of learning theory, indicate that knowledge is generally best learned over a period of time. Staton, in his PQRST study method, suggests the need for a learner to be exposed to a new concept at intervals over a rather long period of time.

Accordingly, the vocabulary program developed by the authors utilizes a five-step approach designed to not only introduce new words to the student but also to gradually increase his or her familiarity with them so that they become a permanent part of the reading, listening, writing, and speaking vocabularies. These five steps are the following: (1) discovering the new word, (2) seeing how the new word "behaves" in the context of a reading situation, (3) reinforcing knowledge of the word in various vocabulary exercises, (4) learning words related in structure to the original word, and (5) using the new word and its "relatives" in writing and perhaps speaking situations.

An instructor will not ordinarily use this approach with any strange word his students encounter. Rather, a decision must be made regarding which words are sufficiently important to require such an intensive approach.

1. Discovering the new word

The objective of the first step is for the student to become familiar with the word, both in appearance and sound. Activities should be designed to bring the student to Dale's second stage--awareness of the word. First, the word should be pronounced for the student. Alternatively, a student in an individualized reading situation may figure out the pronunciation, provided he or she is able to use a pronunciation key with ease. Second, the student should become familiar with the appearance of the word, not only for the sake of recognizing the word on subsequent occasions but also for spelling.

Various word games, many of them available commercially, are helpful at this stage. One of the most common is what is sometimes referred to as a "word maze"--a square block of letters in columns and rows that at first glance appears to be a random assortment of letters. Hidden in the maze, however, are the words to be taught. These may be arranged horizontally across the rows, vertically up or down the columns, or diagonally over rows and columns. Games such as the maze are enjoyable for most students, an important factor at this beginning stage. Even more important, viewing a word in a word list and finding the same word in a maze forms a visual construction of the word and aids in spelling.

2. Seeing how the new word "behaves" in the context of a reading situation

In the second step the student learns the definition of a new word. Rather than giving the definition, the authors suggest that students generally be presented the new word in a sentence and asked to determine meaning from context. Possible definitions of the word may be presented in multiple-choice fashion, with the student asked to choose the best answer. Such a presentation helps students see that the meaning of a word depends upon the context in which it is used. Also, encountering new words in a sentence gives the student practice in using sentence context to define words. While context is the most frequently used method of word attack for the mature reader, many high school and college students neglect this means of word attack. Thus the student generally defines the word himself, in a sentence, using the dictionary if in doubt.

As a second exposure to the word in context, it is helpful if the student at this stage encounters the word in an essay, story, article, or chapter of a book. In a content-area course, this encounter should ideally take place in the reading assignment itself.

3. Reinforcing knowledge of the word in various vocabulary exercises

The third step is comprised of exercises designed to reinforce and expand knowledge of a new word. Dale has suggested that words are learned best when taught in relation to other words. A wide range of relationships is available to the teacher of vocabulary. Synonyms have commonly been used for defining new words as well as expanding the student's vocabulary. Antonyms are also useful for this purpose; a word may be defined in relation to the words it is unlike as well as in relation to words similar in meaning. Analogies are also helpful means of establishing word relationships. Word continuums especially delineate relationships between words. Students may be presented a series of four words--for example, lethal, beneficial, harmless, and unhealthy--and asked to rate them in rank order from best to worst. Just as we become familiar with a new town by relating strange places to familiar ones, we best learn new words by relating them in various ways to words we already know.

Various meanings of multiple-meaning words should be taught. Apparently many students experience greater difficulty with unfamiliar meanings of familiar words than with unfamiliar words. Certainly

students tend to associate one common meaning with a word and overlook other meanings. Studies of multiple-meanings make the student aware of the fact that the meaning of a word is defined by sentence context.

4. Learning words related in structure to the original word

The authors are persuaded that learning related words is an effective means not only of expanding vocabulary and teaching word structure but also of providing review of the original word. Thus some time should be spent on words of the same root, with attention also given to prefixes and suffixes. For example, one provides simultaneous review and new learnings in proceeding from the new word visibility to other words from the Latin videre, such as invisible, envision, and visionary. In addition to learning the root, students may be led to master certain principles of prefixes and suffixes. In the above example, the effect of in-- and en-- as prefixes, and the meanings of the -ible, -ity, -ion, and -ary suffixes may be introduced or reviewed. These word structures give a wider application to vocabulary study as students apply knowledge of prefixes, roots, and suffixes to other new words they will encounter.

5. Using the new word and its "relatives" in writing and perhaps speaking situations

A.J. Harris has stated that an objective of vocabulary study should be to make words a part not only of a student's listening and reading vocabularies but also to add these new words to their

writing and speaking vocabularies. Thus it is important that students use the words in writing or speaking. Not only should their diction improve; the meaning or meanings of the word are also reinforced.

Merely asking the students to write a sentence with the new word is often inadequate. A student's using dissent in the sentence "Joe liked to dissent" neither proves he knows the word nor provides reinforcement of the word. Such an approach can be effective if the teacher insists that the word be used with a focus on its meaning.

Several other techniques of encouraging use of new words in writing may be used. A short paragraph or even an essay focusing on the new word may be assigned. Some of the following topics would be useful in immersing the student in the meanings of the underlined word:

incredible: "My Most Incredible Experience"

foretell: "My (or someone else's) Ability to Foretell Future Events"

ingenious: "A Most Ingenious Person"

Word etymologies may also be a useful basis for writing. Given the fact that hazard comes from a Turkish word meaning "a game of dice," the student may be asked to discuss how a game of dice can be a hazard. Still other writing opportunities may be provided by quotations containing words to be taught. Questions may be asked about a quotation, or a paraphrase may be required.

Vocabulary lessons are not very useful unless the words taught are remembered

and used. A systematic approach to vocabulary study such as the one described enhances the likelihood of a student's making new words his or her own.

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WRITER AND READER AS COMPLEMENTARY ROLES

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ABSTRACT

Learning to write well consists of mastering two complementary "roles" and their respective activities: the role of "writer," which involves searching for ideas, and expressing the discoveries in written language and the "role of "reader," which involves reconsidering the draft from another's perspective, and editing the final version to conform to conventions of written English. Many college students have serious problems learning the reader's role. Exercises typically employed in reading courses offer one means of developing a writer's sense of audience--one way to teach students to play the reader's role in the composing process.

College-level teachers of basic language skills have become increasingly interested in the overlap between skills problems which have, traditionally, been categorized as either reading or writing problems. For example, at the word level, can we say whether a small vocabulary is a problem of reading or writing? Surely it is both: an underdeveloped vocabulary limits both reading comprehension and effective composition. Similarly, at the sentence level, syntactic immaturity handicaps both reading and writing. Francis Christensen (1967) has suggested

that teaching students to manipulate more complex syntactic structures in their writing will also help those students comprehend complicated prose styles. And the growing literature on sentence-combining activities seems to show dramatic improvement in both writing and reading skills as a result of these exercises in syntactic fluency (Stotsky, 1975; Combs, 1977). Finally, at the level of total discourse, the paradigmatic structures that we teach as an aid to reading comprehension (e.g., cause-effect, thesis-proof, problem-solution) are the same structures we ask students to produce in basic composition classes (Sack & Yourman, 1965; D'Angelo, 1977). Such areas of overlap lead one to ponder the efficacy of uniting instruction in reading and writing skills. Moreover, it is possible to view current theories of composing as supporting a unified approach to basic language pedagogy. My aim in this paper is to demonstrate how one specific theoretical model explains the usefulness of reading instruction for the development of competence in writing.

As background for the theory, it will be helpful to review some principles of the development of written language skills in children. The work of James Britton and his colleagues at the University of London has contributed significantly to our knowledge of this subject (Britton et al., 1975). The heart of Britton's research shows that development involves differentiation. As illustrated in Figure 1, the child begins writing in an expressive mode--writing primarily for himself about things in his immediate world, following the natural patterns of his expressive speech. With development,

the child begins to "decontextualize" his experience, and his writing moves in two directions: toward poetic use of language, and toward transactional use of language. Expressive writing serves as a "matrix" from which the more differentiated forms develop.

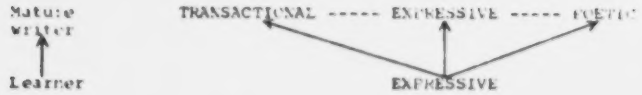

Figure 1. The development of writing ability (from Britton et. al., 1975).

Such a developmental scheme makes sense for young children, but how does it translate into an instructional program for the college student who is a poor writer? Moving to the adult model requires adjustment, but not abandonment of this scheme. The model for mature writing involves four activities, illustrated in Figure 2. The four boxes represent the four major stages of writing: an initial period of finding something to say (prewriting), followed by a formal writing-down of ideas in a draft (writing), then a reconsideration of the presentation (reconsidering or revising), and finally the editing of the completed version to conform to appropriate conventions of

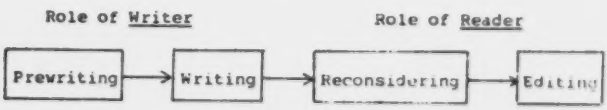

Figure 2. The composing process.

written language. Although this four-stage model is widely accepted, I want to emphasize a particular way of looking at the stages. The first two stages (pre-writing and writing) can be grouped together, and I have labeled them the writer's role; the other two stages are also grouped, and I have labeled them the reader's role. The term "role" is useful because it denotes both point of view (as in "to assume a role") and activity (as in "to play a role in a drama").

The activities involved in playing the writer's role are quite similar to those of expressive writing: the emphasis is on the writer's engagement with ideas, and with his ability to express those ideas in written language. Just as children first learn to write for themselves, one aspect of adult composing also involves finding written language for the problems we are attempting to solve, or for the ideas we are trying to convey. Often, college students with weak educational backgrounds have a poor sense of how to play the writer's role. Such students have no facility with written expression; they seem unable to break through the barrier of written language--although their oral expression may be quite fluent. For such students, active practice in playing the writer's role is crucial for development, and excellent techniques have been suggested for loosening up these blocked writers (Elbow, 1973).

While there are a surprising number of college students who need help with the writer's role, such students are in the minority on most campuses. A much more pervasive problem is a failure to play the

role of the reader. Most college students can manage the expressive task; they may even take it to an extreme, producing what Greenbaum and Schmerl (1970) satirically call "spill." With the writer's role as a base, it is important to move students toward assuming the reader's role: toward conceiving of their compositions as pieces intended for an audience, toward understanding their job as one of writing "reading."

In taking the reader's role, the student literally needs to view his composition from a new perspective, to step out of the writer's shoes and into the reader's shoes, so that he can understand his writing from the point of view of an audience. This is, unquestionably, one of the most difficult aspects of composing. Writers are often quite "egocentric," blinded to other points of view on their own writing (Moffett, 1968; Kroll, 1977). Moreover, reading one's own writing is difficult because it is at odds with the normal reading process (Lester, 1973).

The ability to see writing from the perspective of the reader is a late accomplishment for the child (hence the early emphasis on expressive writing) and it is a difficult achievement for the remedial college writer (hence an initial focus on the writer's role). Lack of this ability, often called lack of "audience awareness," may be responsible for a host of traditional writing problems. Trimble (1975) declares that many of the college writer's problems stem from his self-centeredness: "his natural tendency as a writer is to think primarily of himself and thus to write primarily for himself. Here, in a nutshell, lies the ultimate

reason for most bad writing" (p.15). Mina Shaughnessy (1977) sees similar evidence of lack of audience awareness in basic college writing--the inexperienced writer assumes "that the reader understands what is going on in the writer's mind and needs therefore no introductions or transitions or explanations" (p. 240). James Moffett (1968) believes that the majority of communication problems arise from "the writer's assumption that the reader thinks and feels as he does, has had the same experience, and hears in his head, when he is reading, the same voice the writer does when he is writing" (p. 195).

What can be done about the student's failure to play the reader's role in composing? At least part of the solution involves giving the student experiences in which he can hear many others react to his writing (Elbow, 1973). By hearing how real readers respond, the writer can begin to internalize the voices of others, developing the ability to hear the "voice" of a hypothetical other when reconsidering his writing. Development of a student's sense of audience would seem to be a "basic" in the process of learning to write. Experiences which develop this "sense" should begin early in schooling, and should be a major part of composition curricula at all levels (Martin & Mulford, 1971).

Furthermore, I hypothesize that reading plays a major part in developing the sense of audience necessary to reconsider and edit a text. It seems likely that it is the experience of reading that enables good writers to construct an internal model of what makes an adequate

text. In some poorly understood way, our best students have made the connection between reading and writing--and they have done it without overt instruction. Weaker students, whose backgrounds have included minimal reading and writing, may never have intuited the simple truth that writers write reading. What such students need is not more advice about writing, not exhortations about considering their audience--they need guided experiences with texts to make this connection. Several exercises which reading teachers typically employ can, given a slightly different focus, also teach important principles of composing.

For example, the familiar technique of surveying or scanning for information can illustrate the necessity of highlighting information when writing. From the reader's point of view, a text is easy to survey when the topic is clearly stated near the beginning of an article, when the major subtopics are signaled by appropriate markers (e.g., first, second; moreover, nevertheless, hence; in conclusion, therefore, finally), and when key lexical items recur frequently enough to keep the reference clear. Students in a rapid reading course quickly learn to use such information. Thomas and Robinson (1972) remark that, "Alerting students to conspicuous signposts of the author can markedly increase their speed in scanning" (p. 149). If a writer sees his task as one of producing reading (not simply writing), then instruction which helps him understand how readers use signals to comprehend efficiently is useful for structuring a paper: important information must be highlighted by stating the thesis clearly, by using special signal

words, and by clarifying references to major concepts through repeating key terms. Such careful structuring of a text is not for the writer's own benefit--he already understands the meaning; structure is a concession to the reader.

As a second example, consider the case of a student who, in a paper explaining a quite specific aspect of college life, used the vague title "Colleges." This student clearly had no sense of the function of a title. I assume that this was because he viewed the task of producing a title from the writer's point of view: as a slightly bothersome task, required by his teacher. From the writer's point of view, a title is, perhaps, superfluous. From the reader's view, however, a title can be a quite useful aid in predicting the substance of an essay. When reading instructors teach survey skills they draw students' attention to the information that one can extract from a title. (For example, Sherbourne's (1977) first rule for skimming is to "Notice the title or chapter heading" p. 61.) Had this student been exposed to experiences in which a title was important for reading, and had the student been shown the implications of this experience for writing, I believe he would have made progress toward taking the reader's role.

In reality, the roles of reader and writer, neatly bifurcated in my model, may be simultaneous (or rapidly alternating) activities for many fluent writers. However, separating the roles provides a pedagogy. Rather than abandoning the writer to sink-or-swim on his own, we can offer roles to play, models to follow.

Barry M. Kroll

As a first priority, the novice writer needs to learn to express his ideas in written language. When he has gained some facility with written expression, we must help him improve the quality of his composing by introducing him to the role of the reader. This involves activities designed to decenter his perspective, and it involves guided experience with texts. It is in this latter area--the reading of texts--that college-level reading instruction has much to offer the developing writer.

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DE-MYSTIFYING THE READING PROCESS

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ABSTRACT

Many college and college-bound students read only for facts and have trouble conceptualizing and applying what they have read. Helping these students read beyond the literal level may be accomplished more easily with a four-step presentation which alerts students to the three levels of reading comprehension and gives them experience in identifying literal, interpretative and applicative levels. First, students use pictures to distinguish between concrete fact and interpretation; next they analyze stories and poetry and finally they tackle material from the texts they are currently using. Students analyze questions from past examinations to determine the level of comprehension needed.

In the past three years as either reading instructors in developmental reading classrooms or as reading instructors in a learning center, we have observed that most students seeking help in reading approach their textbook assignments exclusively on a literal level and are not able to answer test questions which ask for interpretations and/or applications from the reading. This type of student experiences almost immediate failure in a college setting because the

majority of reading assignments must be tackled with reading strategies which include methods for making interpretations and applications. The student who reads his psychology text strictly on the literal level becomes angry, discouraged, or mystified when the questions on the psychology exam seem unrelated to the material he studied. (We have observed that even the most literal questions involve recognition of a paraphrase of the text.) Feeling victimized by his professors, and possessing no reading strategies to get at the higher levels of comprehension, this student then usually tries to memorize ever larger chunks of his textbook--a sure bet for repeated failures. For such students, our job has been to provide a procedure by which the student can both recognize the need for higher level comprehension strategies and attempt to incorporate these strategies into his reading.

We would like to suggest an inductive method for meeting these two goals. It has been successful both in a tutoring setting and in a classroom. Unfortunately an inductive approach is not always possible--especially if the student appears at your office door with the need to pass the next psychology exam or face an F as a semester grade. If that's the case, you may wish to bypass the first few steps suggested below and zero-in on the reading techniques applicable to the study demands of that particular psychology professor. Of course, literal level understanding is of crucial importance to the establishment of higher sequential levels of understanding, interpretation, and application. Because of this, we suggest starting with

learning experiences which allow the student to work successfully with that first level. In some cases, it is even preferable to begin with non-printed experiences (pictures or posters of people) because the student has had such negative experiences with reading.

First, we ask the student to record all the information he can obtain from the picture or poster. From here we request that the student use his visual information to pinpoint the age, location, occupation and any other observable details of the person pictured. Next, the student might be asked to compare his own life situation to the one he has built for the person in his picture.

At this point we begin to pin some labels to the processes the student has just used in the picture exercise. We define the terms "literal," "interpretative," and "applicative" and stress that they are reached only in a sequential manner. Interpretations and applications must be based on the literal level information the reader has gained.

To make the transfer to printed material we use an exercise entitled "Little Red Riding Hood--Three Levels of Comprehension." We were introduced to this exercise by Dr. John Childrey. To avoid making the student feel as if he's incapable of handling anything but fairy tales, we state that we use Little Red Riding Hood because we can generally be assured that most students are familiar with the story line.

The actual exercise consists of

four statements written at each of the three levels of comprehension we have identified. (See appendix for a copy of the exercise.) The students must pick two true statements from each level and be able to justify their selection. From the classroom discussion which follows, students discover that the purpose for reading helps to determine the levels of comprehension needed while reading. Also we re-emphasize the importance of the literal level as a basis for interpretations and applications while reading. The next step in the process depends on the needs of the individual student. If he's having difficulty in English class, you may wish to show him how to apply these three levels to literature and poetry.

Although poetry does not have the visual impact of a college, poems may be used in much the same way as collages or pictures to help students differentiate levels of comprehension. For this purpose, very short poems with strong sensory images work best, so students can "see" or "hear" or "feel" the concrete reality the poem describes. We find that poems with similar themes work well. However your own enthusiastic response to the poems is probably the most important criterion to consider in making a choice--so choose poems both you and your students will enjoy discussing.

For this paper, we chose three poems for demonstration: Countee Cullen's "A Brown Girl Dead," Gwendolyn Brooks' "We Real Cool," and Randall Jarrell's "The Death of the Ball Turret Gunner." (Appendix) We started with Cullen's poem

because we felt it was the easiest to "see" on the literal level and had the most concrete detail. "We Real Cool" is more cryptic, but the scene is one familiar to many of the students, and the idiom is one most students know.

Brooks' poem also affords an opportunity to discuss connotation and to point out how difficult it is to compartmentalize these levels of comprehensions rigidly: so much of the information given in "We Real Cool" depends on connotation and inference, as well as the reader's experience.

For our post-World War II students, "The Death of the Ball Turret Gunner" often presents problems on the literal level. Here is where the instructor can insist, with good conscience, that the concrete, physical reality be dealt with first, before moving to interpretation. Usually an aircraft enthusiast will be able to supply all the details necessary to describe accurately the bombers and the ball turret. And should there be a class with a wide age range, as often is the case in a community college, an older veteran may explain that, for him, "wet fur" is a literal fact--the fur lining of the USAF flying suits did become wet with body moisture and, at high altitudes, did, indeed, freeze.

Once everyone has a reasonably accurate visual image, the class can move on to interpretation. It is at this point that the reading teacher, working either one-to-one or with a class, has a signal opportunity to begin the process of de-mystifying the reading of literature. Now is <u>not</u> the time for "English

teacher" analysis of metaphor or meter (although the students themselves may notice them.) Now is the time to act as facilitator, using open-ended questions when necessary, to draw from students what they may not know they know. It was in such a discussion that a young adult pointed out the parallels between the aborted life of the ball turret gunner and a saline solution abortion. This interpretation left several of us, who were older, speechless--until we considered the poem again carefully and saw that the interpretation was stunning: sensitive and supported absolutely by the text. It was an exciting moment for teacher and class.

If the poetry unit is not appropriate, you may want to move directly into content areas such as psychology, sociology, or biology. While a large number of students may respond positively to the "de-mystification" for its own sake, others may be asking for immediate transfer: "How is this going to help my grade?" or "Will it help me on the test?" For these students the assurances that better comprehension is bound to be reflected in better performance is not enough.

At Purdue, we are fortunate in being able to demonstrate that awareness of the three comprehension levels yields short term gains as well as the more lasting benefits of better understanding. Almost every student at Purdue will, at some time, take at least one of the lower level courses in psychology, sociology, biology, or communications. Because of the size of the enrollments in these courses, all major exams are, of necessity, multiple choice, but the instructors

have taken a great deal of trouble to insure that the students demonstrate more than rote memory. The Communication 114 exam is almost entirely application, (e.g. asking students to identify the rhetorical or persuasive techniques being used in a dialog or hypothetical situation.)

On the other hand, the Psychology 120 exams are purposely structured to include all three comprehension levels. Professor Joseph Rubinstein, coordinator of Psychology 120 and author of its text, says that a number of his better students tell him that most of the questions on his exam are interpretive or applicative.

"And it's true," says Dr. Rubinstein, "that a good student who knows how to deal with concepts doesn't have to read the text very thoroughly. I've provided summaries, overviews, and diagrams of all the major concepts contained in every chapter. A student who reads those carefully and understands them well can dispense with the body of the text which primarily explains and provides examples. A student taking an exam can make inferences or deductions, from the concept summaries, about which answer option is the correct one."

Although the student who is not so adept at applying the generalization to the concrete must do much more memorizing than the student cited above, he should be very careful of rote memorization not tied to concepts. Rubinstein demonstrates this graphically with a transparency he uses to help students distinguish between rote memorization and memorizing tied to concept.

In the first example, a catch mnemonic helps the student visualize and remember Piaget's four developmental stages. Although this technique may help the student remember the stages, it will be of no help with questions that go beyond identification or listing. A visual mnemonic may still be employed, however, by creating a memory picture of what the child does at each stage, enabling the student to go beyond mere identification to application.

We have been fortunate in having teachers in content areas who are extremely cooperative in discussing with us the rationale behind their tests, who maintain files of sample exams for students to study. These teachers are aware of the differences in conceptualizing that the three levels call for and plan material accordingly. Generally, this sensitivity makes for good tests. Teachers are on the alert for troublesome questions and are aware that mixing literal and interpretative answers to the same questions creates confusion for many students and difficulties for the instructor.

Having students examine old tests to determine how best to study is the first step in efficient test-taking. The final step is to have the students analyze the tests they have taken in order to zero in on trouble spots.

If a student is in immediate danger of failing a course, this step might fall somewhere nearer the beginning of the process. This would be particularly true if the student were reluctant to give up his memorization strategy and resisted a shift to the reading strategies we might suggest.

The student and instructor should examine a quiz to determine which levels of understanding the professor tests and to assess the student's performance at these levels. For example, when we examined Dr. Rubinstein's test for Psychology 120, we found that the majority of the test items concerned either interpretations or applications of the text material. The literal items, which were few in number, required that the student be able to recognize a paraphrase of the material that he had read.

Obviously helping students identify comprehension levels is no panacea for the problems these students have with comprehension. However, we do believe that this is a first big step in rendering reading less mysterious for the students who are often baffled by their inability to find what more accomplished readers find in a given selection. Once the literal level reader understands that interpretation and application are ways of thinking about reading that can be named, understood, and manipulated, he is less threatened, more willing to try.

APPENDIX

I

A Brown Girl Dead [1]

With two white roses on her breasts,
White candles at head and feet
Dark Madonna of the grave she rests;
Lord Death has found her sweet.

Her mother pawned her wedding ring
To lay her out in white,
She'd be so proud she'd dance and sing
To see herself tonight.

--Countee Cullen

II

We Real Cool
The Pool Players.
Seven at the Golden Shovel. [2]

We real cool. We
Left school. We

Sing sin. We
Thin gin. We

Lurk late. We
Strike straight. We

Jazz June. We
Die soon.

--Gwendolyn Brooks

III

The Death of the
Ball Turret Gunner [3]

From my mother's sleep I fell into the State
And I hunched in its belly till my wet fur froze.
Six miles from earth, loosed from its dream of life,
I woke to black flak and the nightmare fighters.
When I died they washed me out of the turret with a hose.

--Randall Jarrell

A Brown Girl Dead

[1] From the book ON THESE I STAND by Countee Cullen
Copyright, 1925, by Harper & Row, Publishers, Inc.
Renewed 1953 by Ida M. Cullen
Reprinted by permission of Harper & Row Publishers, Inc.

We Real Cool: The Pool Players:
Seven at the Golden Shovel

[2] From the book THE WORLD OF GWENDOLYN BROOKS
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[3] "The Death of the Ball Turret Gunner" from THE COMPLETE POEMS by Randall Jarrell. Copyright 1945 by Mrs. Randall Jarrell; renewed copyright (c) 1973 by Mrs. Randall Jarrell. Reprinted with the permission of Farrar, Straus & Giroux, Inc.

(Student Handout)

LITTLE RED RIDING HOOD EXERCISE Unit IV

Level I - What did the author say? Check two.

_____ a. Red Riding Hood met a wolf in the woods.

_____ b. Red Riding Hood visited her aunt.

_____ c. Red Riding Hood recognized the wolf immediately upon entering Grandma's house.

_____ d. The woodsman killed the wolf.

Level II - What did the author mean? Check two.

_____ a. The wolf only wanted the goodies meant for Grandma.

_____ b. The wolf appeared a lot like Red Riding Hood's grandmother.

_____ c. Red Riding Hood was a naive little girl.

_____ d. Red Riding Hood was a trusting little girl.

Level III - How can we use the meaning? Check two.

_____ a. Don't walk in the woods alone.

_____ b. Don't speak to strangers.

_____ c. Look more carefully at sick grandmothers.

_____ d. All's well that ends well.

_____ e. Don't send a little girl to do a nurse's job.

This exercise courtesy of Dr. John Childrey, Professor of Education, Purdue University.

CAN COLLEGE STUDENTS IMPROVE READING SKILLS IN AN INDIVIDUALIZED, SELF-PACED READING COURSE?

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ABSTRACT

This paper compares pre and posttest data from a self-paced, individualized reading class to similar data collected from regular reading classes. The author, in showing that the students in the experimental, self-paced class perform as well on the tests as the students in the control group (the un-self-paced classes), infers that since both methodologies achieve about the same result, directors of reading programs might prefer to choose the cheaper, self-paced method.

The purpose of this study was to determine whether students in an individualized, self-paced reading course in the General College could learn to read as well as students in the regular reading classes.

Two difficulties stood in the way of studying this problem. The first was finding a suitable control that would combine information from several General College reading teachers using different approaches on several different sets of students meeting at different times of

the day. This control was found in a study of all reading courses in General College during the Winter, 1975, quarter.

The second difficulty was to decide how to measure reading ability. In the 1975 study, reading ability had been measured by Alton Raygor's Reading Test, Part I (McGraw-Hill, 1970) which measures reading rate on easy and difficult material and immediate recall of material read. Although these are the two reading abilities students work on most, they are not the only ones taught in General College reading courses.

The research hypothesis, then, restated in terms of the limitations posed was: Will students in a Winter, 1977, individualized, self-paced reading course perform as well on Part I of the Raygor Reading Test, Forms A and B, as a group of students from other sections of the reading class of Winter, 1975?

Method

This study uses one control group and one experimental group. The control group consists of 38 students from the three sections of the reading class offered in Winter, 1975. These students took Form A, Part I of the Raygor test as a pretest at the beginning of the quarter before commencing any course work. At the end of the quarter, these students took Form B, Part I of the Raygor test as a posttest. The experimental group consists of the 17 students in one section of the reading class in Winter, 1977. These students also took Form A of Raygor's test as a pretest and Form B as a posttest. Since

the experimental and the control groups may differ from one another on the pretest, the study uses one-within, one-between, repeated measures analyses of variance to analyze the data generated and to provide statistical tests of the hypothesis.

Subjects

Enrollment in reading classes in General College is voluntary. Students elect to take the course out of their own perceptions of their needs. One might infer such students recognize that they have reading problems severe enough to affect their academic standing and their potential for academic success, but it is not clear whether other non-random subject variables need to be accounted for. Only those subjects for whom both pretest and posttest scores are available were included. Students were unaware they were participating in an experimental course until after all data had been collected.

The Experimental Course

The experimental course was individualized and self-paced. After the pretest had been given and scored, the teacher discussed with each student individually what the test showed about the student's reading skills. During this interview, the teacher worked with the student to formulate objectives for the student's work in several areas of reading skills. These areas included reading speed; reading speed; reading recall, comprehension, note-taking, skimming, scanning, surveying techniques, and spelling. All students worked on four areas, but reading speed and reading recall were common

to all students. As students began work on improving reading speed and reading recall, the teacher showed them how to set up and use equipment and how to keep records of their progress. The teacher then permitted students to work at their own rate and in their own way, guiding work only if progress charts failed to progress or if students attempted work that was too difficult or too advanced for them. The teacher monitored students' progress, encouraged students individually to achieve goals, sympathized with students who were having problems, congratulated students on their achievements, suggested alternative approaches, answered questions, and tinkered with balky machines. The students did all the real work.

The Test

The Examiner's Manual (1970 edition) for Raygor's Reading Test gives the following reliability and validity information. Whole-test internal consistency coefficients from application of the Kuder-Richardson 20 formula are 0.89 for Form A and .89 for Form B. Computation of consistency, of course, ignores reading rate scores and uses scores from the recall portion of the test used in this study as well as scores from other parts of the test not included in this study. Part-score intercorrelations show that the correlations between easy and difficult reading rates are 0.72 for Form A of the test and 0.71 for Form B. For Form A, the correlation of easy reading rate to recall is 0.01 and of difficult reading rate to recall, 0.07; for Form B, these correlations are 0.10 and -0.15, respectively. The 1970 edition of the manual does not report coefficients of stability

and interform reliability. Content validity is assured by a number of techniques employed in constructing the tests. Criterion-related validity using total scores from the B form of the Nelson-Denny Reading Test as the criterion are moderate but significant for both reading rates and for the recall portion: 0.47 for easy reading rate, 0.41 for difficult reading rate, 0.56 for recall.

Results

Table 1 summarizes the data used in this study. Part I of the reading test is divided into four parts: two measures of reading rate and two measures of recall. The two measures of recall are combined in this study, as Table I shows, to give a single 20-item test. The two measures of reading rate, however, are reported and analyzed separately.

TABLE I

Summary of Data

Group	Pretest (Form A)			Posttest (Form B)		
	Reading Rate		Recall	Reading rate		Recall
	Easy wpm	Difficult wpm	# correct	Easy wpm	Difficult wpm	# correct
Winter 1975 (Control) N = 38						
X	217.61	177.29	11.45	320.11	266.87	10.71
SD	51.78	44.79	4.12	86.88	78.72	3.30
Winter 1977 (Experimental) N = 17						
X	209.00	155.41	10.82	268.06	209.80	10.82
SD	49.90	27.41	3.96	48.01	36.25	2.77

Tables II - IV present three separate one-within, one-between repeated measures analyses of variance for easy reading rate, difficult reading rate, and recall, respectively. In these tables, the column labeled "Source" explains the sources of variance used in the analyses. For example, the row labeled "Groups" in the sources column indicates variation due to the groups in the study, that is, the Winter, 1975, control group and the Winter, 1977, experimental group. The numbers in this row allow one to infer whether or not, after combining pretest and posttest scores, the two groups differ significantly. The next row in the table is labeled "S(G)" and refers to differences among students' scores within each group. The third row of numbers is labeled "Tests" and refers to pretest-posttest differences in students' scores. These numbers allow one to infer whether or not the combined pretest scores for the two groups significantly differ from their combined posttest scores. The next row, "GT," refers to possible variations due to interactions among groups and tests. The last row of numbers is labeled "TxS(G)" and refers to variation due to test among students within groups.

Let's now look at what these analyses show. In Table II, the only significant result is that the difference between pretest scores and posttest scores is significant ($\alpha = 0.01$). However, the crucial question for this study is not whether or not real pretest-posttest differences exist, but whether or not the experimental group scores are at least as good as the control group scores. Thus the failure to find a significant difference for "Groups"

in the table implies that the means of the two groups are about equal. Thus one cannot reject the hypothesis that the two groups performed equally well on the easy reading rate sub-part of the Raygor test both on pretest and on posttest.

TABLE II

One-Within, One-Between Repeated Measures Analysis of Variance of Easy Reading Rate Data

Source	df	MS	F*
Groups	1	21603.4	4.4
S(G)	53	4887.6	
Tests	1	218183.5	55.3**
TG	1	11082.5	2.8
T x S(G)	53	3946.2	

*Significance criterion value for F-ratios, given $\alpha = 0.01$, is 7.08.

**Strength of association: est $\omega^2 = 0.51$

Table III presents a somewhat different picture from that of Table II. Apparently the difficult reading material brought out some real differences between the control group and the experimental one since Table III shows two significant

results, assuming $\alpha = 0.01$ for each F-ratio. Yet the fact that the group variable yield a significant result makes one wonder whether this difference is due only to posttest differences between them, or whether the difference is present both at pretest and at posttest. By using

TABLE III

One-Within, One-Between Repeated Measures Analysis of Variance of Difficult Reading Rate Data

Source	df	MS	F*
Groups	1	36579.9	8.0**
S(G)	53	4569.5	
Tests	1	170365.7	95.7***
GT	1	7263.3	4.1
T x S(G)	53	1780.1	

*Significance criterion value for F-ratios, given $\alpha = 0.01$, is 7.08.

**Strength of association: est $\omega^2 = 0.11$; post-hoc comparison of the two pretest means is not significant, of the posttest means is significant (Hays, Statistics for the social sciences, 2nd. ed., p. 607).

*** Strength of association: est $\omega^2 = 0.62$

Scheffe's method of post-hoc comparisons described in Hays's Statistics for the Social Sciences, 2nd edition (1973, p. 607), it becomes clear that the pretest difference between groups is not significant, whereas the posttest difference is significant ($\alpha = 0.01$).

In table IV no result is significant. The most cheerful thing one can say about the recall scores is that at least they did not decline significantly from pretest to posttest. However, the result of interest for this study is the one labeled "Groups." For this variable, the F-ratio is 0.07, which indicates virtual identity of groups, regardless of pretest or posttest.

TABLE IV

One-Within, One-Between Repeated Measures Analysis of Variance of Recall Data

Source	df	MS	F*
Groups	1	1.5	0.07
S(G)	53	21.7	
Tests	1	7.1	1.5
GT	1	3.3	0.7
T x S(G)	53	4.8	

*Significance criterion value for F-ratios, given $\alpha = 0.01$, is 7.08.

Discussion and Conclusions

The analysis shows that the experimental group and the control group were not significantly different from one another on any of the pretest measures. Also, on two subparts of Part I of Raygor's Reading Test the two groups are not statistically different at posttest. Thus on two of the three measures employed, students in the experimental group performed as well at posttest as students in the control group. If it is safe to infer that performance on these subparts of the test reflect students' true command of reading skills, then students in the self-paced individualized course make just as much progress in improving their command of reading skills as students in non-individualized, non-self-paced courses.

The results reported in Table III still pose some difficulties. After all, even though the control group and the experimental group started from about the same point, by posttest time the control group performed significantly better than the experimental group. There is no apparent reason for this discrepancy. But if one computes the strength of association between the two posttest means using the techniques described in Hays (p.486), one discovers that the significant result may not be an important one: the difference in group membership accounts only for 11 percent of the variance in difficult reading rate posttest scores. So even though the difference in these posttest means is significant, the difference is not large enough or strong enough to warrant giving it the status of being a true exception to the research hypothesis.

Why spend so much time reporting a study in which no significant differences between groups were found. The reason is simple; if one has to choose which of two courses to offer and if one suspects that both courses achieve about the same results, he would probably choose to offer the cheaper of the two courses, especially if setting up and running the cheaper course could be done by personnel with little or no experience teaching the subject. The experimental, individualized, self-paced course in this study is a very inexpensive course compared to the control courses and was given by a faculty member who had never taught a reading class before and who had very limited exposure to practical and theoretical issues in reading education. The implication of this study is that it might be quite possible to reduce the cost of reading programs through individualizing and self-pacing and, at the same time, to make these programs available to a larger number of students. In some colleges where few faculty feel qualified to teach reading and where reading is taught in small classes, only a few reading classes are offered each quarter, and those classes reach only a portion of those students who want them. Since self-paced, individualized learning need not rely on classes for its structure, reading classes could be dropped in favor of a reading laboratory open to all students on a full-day schedule and run by a single staff member. The typical small reading program offering reading courses probably handles fewer than 150 students per year. Direct salary costs of teaching staff for the reading program runs around $16,000 per year, giving a direct salary cost per

per student of $107 (a very conservative estimate of the true cost per student). This kind of program usually offers only nine or ten sections of the reading course per year, giving about 120 hours of classroom instruction per quarter (4 hours of instruction per section x 3 sections x 10 weeks). Yet in a laboratory setting, assuming that direct salary cost for a full-time attendant-teacher runs $16,000 per year and assuming average time spent in the lab per day by each student runs one hour per day, then given an 8-hour day and 15-student maximum occupancy, such a reading laboratory could possibly handle as many as 360 students per year, could offer 400 hours of instruction per quarter, and could reduce direct salary cost per student to around $45. For $16,000 per year, it is possible to hire a highly-trained professional reading teacher to run the laboratory.

The point of this discussion is that studies comparing educational methodologies miss the mark when they report no significant differences in their results and stop there. Methodologies do not exist in an economic vacuum. Given no significant differences between two methodologies in their effects on students' learning, one can then feel more secure in choosing the methodology that is most economical.

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A REVIEW OF SIGNIFICANT STUDIES WITH HIGH RISK STUDENTS: REMEDIATION FOR COLLEGE STUDENTS

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ABSTRACT

This report reviews 18 significant studies utilizing high risk students in a learning center. Eight studies report results of a pre-college treatment, and 10 studies report on students in a learning center while attending college. Study habits training has made a difference in helping high risk students to make acceptable grades in college. Usually the combination of a remedial course such as reading along with study skills training is most effective. The literature dealing with programs for high risk students is limited; however, the literature does indicate that high risk students can be helped through the application of a study skills/remediation program.

Study habits training has made a difference in helping high risk students to make acceptable grades in college. Usually the combination of a remedial course such as reading along with study skills training is most effective.

One of the earliest studies conducted with high risk students using a study skills treatment was reported by Luella Pressey at Ohio State in 1928. Pressey (1928) reported on a study methods class offered to students on academic probation.

The study skills course consisted of one lecture, one interview and one two-hour laboratory period each week during the semester. The topics covered included: note taking, time budgeting, efficient reading methods and a need for adequate preparation. During the period from 1924 through 1927, 54 students were enrolled in the study skills class. These students were compared to a control group which had no study skills treatment and were equal in ability. In the study skills group 58% were able to continue with their studies and 42% were not. In the control group (those with similar ability but no study skills training) 82% were not able to continue and 18% were able to continue their studies. Pressey (1928) concluded that study skills training can help students, but those who are in the higher ability groupings have a better chance to benefit from the training. Tresselt (1966) also found that students of higher ability have a better chance to benefit from study skills training.

There are eight relatively recent studies that claim success with the application of a pre-college study skills/remedial course (Maxwell, 1963; McConihe, et al., 1964; Egeland, et al, 1970; Christ, 1970; Miller and Stillwagon, 1970; Pepper, 1970; Kling, 1972; and Shaffer, 1973). This research indicates that strong remedial/study skills programs can help underdeveloped students. Maxwell (1963) reported on a pre-college summer program at the University of Maryland. In the summer of 1961 a program was designed to enable low achieving applicants to test their ability to perform college work. Students whose high school averages were below C and who scored in the bottom

30 percent on University of Maryland freshman norms (American Council of Education Psychological Test, Cooperative English or Cooperative Algebra) were required to attend a special six weeks pre-college summer session in order to qualify for continued enrollment. This program was designed to maximize the student's chances of academic success. All students were required to enroll in freshman English and to elect either mathematics, sociology or American government. Academic success was defined as passing both courses and achieving at least a grade of C in one of them. A battery of reading and study skills tests were administered at the beginning and end of the summer session. An individual program was prepared for each student indicating a starting level and the sequence of activities to follow in order to improve upon their weakest area. All students were required to attend the first reading and study skills laboratory; however, subsequent attendance was voluntary. If the student chose to attend the reading and study skills laboratory, he was required to work on his weakest area for one week; after that he could work on any of the skills or materials that he preferred. Three hundred fifty-six students registered for the program and 176 attained grades enabling them to continue.

Maxwell (1963) found the academically successful students made significantly higher initial scores than the failing students on reading rate, vocabulary and comprehension tests. Both groups (failing and passing) showed significant improvement in vocabulary and study skills habits and attitudes. Student reactions to the program were highly favorable as revealed

by a questionnaire administered with the posttests. The successful students were also found to be more flexible in their use of the laboratory materials and worked on more varied skills than did failing students.

McConihe, et al. (1964) reported on a preparation for college, noncredit program conducted by the Psychological Research Services of Western Reserve University. This program was a "how-to" course providing information on how to take notes, how to listen to lectures and how to study. This program was conducted over a four-week period for any prospective college student that wished to take it (there were no controls for motivation or ability). During the summer of 1961, a total of 117 students enrolled in the preparation for college course. The results indicated the program had a positive effect upon some skills related to performance. Reading measures showed considerable improvement in each of three areas (vocabulary, speed of comprehension and level of comprehension). A measure of skill in written expression did not show improvement. Questionnaire items regarding study attitudes showed a distinct change emphasizing initiative and responsibility. McConihe, et al. (1964) contend that good students: make improvement, get involved with what they are learning, are devoted to their work, set high standards of performance and utilize realistic planning strategies. The overachieving student is characterized as a dedicated, devoted individual who is willing to spend the required amount of time and energy completing assigned tasks.

Egeland, et al. (1970) reported on

project Upward Bound. This was a pre-college enrichment program sponsored by the Office of Economic Opportunity for high school students from low-income families. Its purpose was to generate the skills and motivations necessary for college success among students from low-income backgrounds and inadequate secondary school preparation. "A typical Upward Bound program enrolled 75 students who participated in two phases: a summer phase in which the student spent eight weeks in residence on a college campus where he experienced a fairly intensive, full time educational program, and a second, or follow-up phase, in which he received some additional support (for example, tutoring and counseling) during the following academic year in his own high school" (Egeland, et al., 1970, p. 375). In June, 1967, approximately 6,000 Upward Bound students were graduated from high school, and about 80 percent were admitted to some form of higher education. The Upward Bound rate of enrollment in an institution of higher education was 68 percent compared to 48 percent in a matched non-Upward Bound control sample. No information about persistence was reported.

In 1970, Christ reported on a pre-college summer reading/study skills laboratory that attempted to bridge the reading/study transition from high school to college. Christ's program was offered at Loyola University of Los Angeles for five years prior to his report (Christ, 1970). Christ's program was based on these assumptions:

1. Learning begins where the student is.

2. Learning how-to-learn can be learned.
3. Learning must be meaningful and goal-oriented.
4. Learning is a process.
5. Learning is not always easy, nor is it always fun.
6. Learning can be personal regardless of numbers of students.
7. Each student is unique.
8. Each student is a fellow human being.
9. Students can and do learn by themselves.
10. Students do learn from each other.
11. Students learn at different rates.
12. Students learn in different ways.
13. Diagnosis, referral, and follow-up are synonymous with counseling.
14. Computerization need not be dehumanizing.
15. Individual learning can be economical.

Study laboratories were held three hours a day, five days a week, for four consecutive weeks. Typical group activities included lecture discussions on learning, study and reading, high school to college adjustment, critical reading, taking notes, outlining and underlining techniques. Christ stated that the reading/study skills course does make a difference but he did not present any empirical data.

Miller and Stillwagon (1970) reported success with a reading remediation program between high school and college with underachieving students. Their program lasted three weeks. The American College Test (ACT), Edwards Personality Preference Schedule, Missouri College English Placement Test, Nelson-Denny Reading Test,

Strong Interest Inventory, and the Wechsler Adult Intelligence Scale were administered for the purpose of planning an individualized program. The group as a whole had a predicted grade point average (GPA) of 1.5 based on high school grades and ACT scores, but they achieved a GPA of 2.2 in summer school and 2.0 in the fall. Miller and Stillwagon (1970) stated that programs of this sort, that are aimed at the underachiever, must be structured in such a way as to encourage and provide an opportunity for the students to help themselves.

Pepper (1970) reported success with a reading/study skills course using students who would not have been admitted to Wayne State University based upon their Scholastic Aptitude Test (SAT) scores and high school GPA. Students who applied for admission but did not meet admissions criteria were invited to enter an experimental summer quarter program. All students were required to take freshman English, either social science or political science, and a non-credit reading and study skills course. The class work was supplemented by academic advising, vocational and educational counseling, financial aid service, and tutoring. A total of 212 marginal students were enrolled in the summer classes, and 155 later successfully completed four quarters of academic work in their first year. Informal evaluations by students and instructors indicated that the reading and study skills training made a positive contribution to the academic adjustment of these students.

The Brown-Holtzman Survey of Study Habits and Attitudes (SSHA) was administered at the beginning of the study skills

course, and individual profiles were returned to the students. These profiles served as a basis for discussions of the role of attitudes, motivation and study skills required to be successful in academic work.

Kling (1972) from Rutgers University claimed to have made the first empirical evaluation of a summer program for socially disadvantaged incoming freshmen. A two week summer reading and study program was developed for 61 disadvantaged incoming freshmen; 84 percent were black. In the morning mathematics was taught, and in the afternoon reading skills and study skills were emphasized, supplemented by work on library utilization. The core program was designed to change basic attitudes and approaches toward academic work, particularly reading skills. Success was demonstrated by posttest gains on vocabulary, reading comprehension and reading rate.

Shaffer (1973) reported on an experimental program that selected 89 disadvantaged minority high school graduates to attend a special preparatory program before entering San Fernando Valley State College in the fall semester. This program was conducted on the campus for a period of eight weeks. During this time, the students attended classes and tutoring sessions designed to improve their academic skills and to orient them to the college environment. Eighty-nine students were selected from those attending an Educational Opportunities Program (EOP). The selected 89 students had lower high school grades than the larger EOP group. Only five of the 89 students would

ordinarily have qualified for regular admission as freshmen. The Cooperative English Reading Comprehension Test (Form 1C), the Brown Holtzman Survey of Study Habits and Attitudes (Form C), the Bennett Test of Mechanical Comprehension (Form BB), the Employee Aptitude Survey, the Visual Speed and Accuracy of Space Visualization Tests, and the Strong Vocational Interest Blank were given and used for general educational guidance and specific assistance. High school grades and SAT scores were also used. Two years later tabulations were made on their college performance (number of semesters they were in attendance and academic credits earned.) Eighty of the 89 enrolled as freshmen, and 35 were eligible to continue their education after attending for four consecutive semesters. The results indicated that student performance on the Brown-Holtzman SSHA most consistently differentiated between upper and lower criterion groups. The highest correlations obtained in the study, for both males and females, were between SSHA Educational Acceptance scores and the criterion of the total number of college credits earned in the two-year period. In another study Anderson and Kuntz (1959) also found a high correlation between study habits and grades.

These eight studies (Maxwell, 1963; McConihe, et al., 1964; Egeland, et al., 1970; Kling, 1972; and Shaffer, 1973) suggest that progress is possible when you work with high risk students using a study skills/remedial course. Progress can be made, if the student enters a sound study skills/remedial course and sees it through to completion. There are many study skills courses being offered that are poorly

administered with non-professional personnel. Too often study skills courses are run by individuals that do not know the literature on student characteristics or study skills training.

There are studies that have attempted to improve upon indicated low ability with treatments applied during the course of college work (Shaw, 1955; Blake, 1956; Ikenberry, et al., 1966; Richabaugh, 1969; Cartwright, 1970; Roselia, 1970; Cartwright, 1971; Ritter, 1971, and Kaye, 1972) Shaw (1955) reported on an attempt to evaluate the effectiveness of a study skills program at the University of Wyoming from the fall quarter of 1949, through the spring quarter of 1951. A total of 153 students with a mean GPA of C-minus were enrolled in the study skills course (58 percent were on academic probation). After the study skills course their mean GPA was slightly better than an average C grade (an improvement of .56 of a grade point on a 5 point numerical value system). Results from an evaluation questionnaire indicated that 95 percent expressed the opinion that the course was of considerable value to them. Blake (1956) found that requiring students on academic probation to take a study and reading skills course was beneficial. Blake concluded that compulsory training given students does help many to achieve their immediate academic goals.

Ikenberry, et al. (1966) reported on a training program in reading/study skills with a reduction of the academic credit load for 330 students, selected from the 1964-65 freshman class of West Virginia University. These students had a predicted GPA of 1.99 on a 4.00 scale.

Criterion measures were GPA and withdrawal rate per semester. Students were randomly assigned to four groups: (1) a reading/study skills class with reduced credit load, (2) a reading/study skills class with no reduction in credit load, (3) a reduced load with no special class, and (4) a control group with no special class and no reduction in credit load. At the close of the first semester each of the criterion measures showed a significant difference in favor of those groups taking the reading/study skills course. The group with only the reduced load achieved at a level below the other three groups, and had the highest rate of withdrawals. Significant interaction effects between the special course with reduced credit load and without reduced course load were shown. The Brown-Holtzman SSHA Inventory which was used as a secondary variable was related to achievement according to Ikenberry, et al. (1966). Rickabaugh (1969) reported significant improvement on GPA using students on academic probation at the University of Utah by applying a study skills treatment for one semester.

Cartwright (1970, 1971) reported success with a study habits/reading remediation course during college sessions. Cartwright (1970) said the study skills section was extremely important. In 1971, Cartwright reported on a one year required study habits/reading program with students who were reading at the ninth grade level or below as freshmen. At the end of one academic year, gains ranged as high as five years eight months and as low as two months (Cartwright, 1971)

In 1970, Rosella reported on research

with high risk students at Bucks County Community College, Newton, Pennsylvania during the 1969-70 academic year. Freshmen who ranked in the bottom 40 percent of their high school graduating class and had Scholastic Aptitude Test (SAT) scores below 800 with a verbal score below 400 were informed that a reading and study skills program was available. Of the 82 students who met the criterion, 41 enrolled and 33 completed the entire course. The course involved two hours of instruction each week in reading and study skills, plus one additional hour of independent work combined with educational and vocational counseling. Students who did not attend the study skills group were used as the control group. Both groups were given pre and posttests using three subscales of the Cooperative Reading Test (vocabulary, speed of comprehension and level of comprehension) and the student attitude subscale of the Brown-Holtzman Survey of Study Habits and Attitudes. A comparison was also made of semester grade averages and English grades. The experimental group had significantly higher grades than the control group. They also had improved scores in reading speed, reading comprehension and the student attitude subscale of the Brown-Holtzman SSHA. It is encouraging to know that some two-year institutions of higher education are developing quality study skills programs that can demonstrate their usefulness. It is most likely that more students in two-year institutions need study skills and remedial help than students in four-year institutions. Measures of intellectual orientation clearly differentiate among high school graduates who enroll in two-year colleges and those

who attend four-year colleges. Students attending two-year institutions are lower on measures of intellectual orientation when compared to students attending four-year institutions (Trent and Medsker,1968).

Ritter (1971) conducted a study skills program at the University of Manitoba, Winnipeg emphasizing: (1) listening and taking notes, (2) underlining, (3) skimming, (4) making study sheets in outline form, and (5) taking examinations and writing term papers. This special course was conducted for one academic year with 149 upperclass students with a 2.09 mean GPA. At the conclusion of the special course, the mean GPA was 2.39 (statistically significant at the .01 level of confidence). No controls were used for ability or motivation (those who requested the course were allowed to take it.)

Kaye (1972) reported on a required study skills/counseling program for failing college freshmen at the University of Connecticut. Eighteen matched pairs of students for control and experimental groups were randomly selected. They had a mean GPA of 1.3. A letter requiring participation was sent to freshmen assigned to the experimental group. The treatment was applied the second semester. The experimental group was significantly superior to the control group on mean GPA (2.1 compared to 1.4). Kaye (1974) stated the academic system should assume more responsibility for the problem of academic failure by requiring a study skills treatment program geared to the student who fails during the freshman year.

Pauson and Stahmann (1973) reported

on the characteristics of high risk students who did graduate without any special treatment given. The so-called high risk alumni of the University of Iowa were characterized as being dominant, enthusiastic, sociable, and they had strong needs to achieve and secure high status. This research was conducted using a questionnaire and Holland's Vocational Preference Inventory. Pauson and Stahmann (1973) said more research is needed to determine the motivational factors involved in college selection by high risk students. They implied that institutions involved with high risk students need to operationally assess the students' behavior and individually work out a program to help each student acquire the habits and skills that will enable them to succeed.

Gelso and Rowell (1967) reported on a study to determine if there are significant differences between students who perform well enough in a college on-trial program to be admitted as regular students and who persist through the freshman year as compared to students who do well enough in a college on-trial program to be admitted as regular students but do not persist. It was found that non-persisters were less sure about the future and the role which college would play in it, and they tended to schedule and carry out their daily activities with less effectiveness than the persisters. Non-persisters also displayed less ability to get along with their instructors and colleagues, as reflected principally in a higher degree of mistrust and disrespect toward their instructors, and less cooperativeness with their associates. Gelso and Rowell (1967) concluded that the non-persisters

were not sure about college and were very undecided about the direction their lives should take in the future.

Through interviews with students having academic problems in the first year of college, Lesnik (1972) found the basic problem to be inefficient study skills or a deficient vocabulary in the discipline being studied. The interviews revealed a wide proliferation of problems ranging from those which directly impinged on study skills (such as inadequate study techniques, scheduling time, word-by-word reading and poor comprehension) to indirect problems such as the college curriculum, college instruction and poor self-esteem. In many cases the direct problem was related to study behavior, but it could not be fully understood apart from the total behavior complex. Motivational factors explaining academic achievement are varied, complex and difficult to understand (Lesnik, 1972). Lesnik (1972) said lack of motivation was expressed in some form of resistance to becoming involved in studies. This is a most important observation for students, parents and teachers.

In a thoughtful article, Heist (1960) stressed the need for variety in the facilities, programs and educational procedures of higher education. In theory there should be institutions that specialize in working with high risk students as well as other varieties of students. The question about the "correctness" of choice of college for entering students should be asked much more frequently, said Heist (1960). Richards, et al. (1966) recommended that a wide variety of colleges be established to cater to the needs

of particular types of students.

Presumably an appropriate match between student and college would facilitate academic development for a variety of different student types. The problem for most institutions of higher education is that they do not have enough professionally trained people to make student evaluations, then conduct follow-up treatments with adequate remedial/study skills courses. Most study skills instructors have had little professional training in the specific area of study skills and habits. They usually develop their knowledge by on-the-job training. Many study skills courses are conducted by individuals with little or no knowledge of the research literature on student characteristics or specific study skills strategies required for individuals with unique problems.

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YESTERDAY'S STUDENTS TOMORROW'S CHALLENGE

Invitational Address

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ABSTRACT

The return to college of many adults as a result of legal requirements for maintaining licensure, vocational skills and rising aspiration levels present the modern campus with new challenges. Mature students have different motivations and attitudes toward study which affect the pedagogical approaches and the nature of the support services offered by the administration.

The counseling needs of such students center around such variables as lack of self-confidence, unrealistic expectations of progress, conflicting values and attitudes, resistance to abstract or general learning tasks, reluctance to seek help, and lack of efficient reading and study skills.

An academic survival skills program is described which makes provision for orientation to the college campus and its services, the diagnosis of academic learning skills and support program for skills development and personal counseling.

The Return to School Movement

More and more adults are going back to college these days, both to complete academic degrees and to take refresher courses to update their professional skills. The Supreme Court of Iowa has recently mandated continuing education for lawyers, and there are similar requirements in nursing, real estate, and medicine. There is a movement among most

licensed occupations to require continuing education today, and an unbelievable growth in business and industry requiring updating of their professional employees. In the last 10 years there has been an exponential rise in the number of programs being developed and staff being employed to respond to the substantial increase in adults engaged in a myriad of traditional and non-traditional educational programs. In 1962 there was an estimated 25 million people attending some form of adult education program; in 8 years this figure has increased to 31 million. An additional 48 million indicated an "interest" in some kind of further learning in a study conducted by Cross, Valley and Associates. This upward trend is projected to continue at least for the remainder of this century.

Iowa's state universities have reversed the trends of recent years and for the second year in succession are seeing increased enrollments. Officials attribute these increases to more dropouts returning to school, fewer juniors and seniors leaving school before graduation, and the presence on campus for the first time of a larger percentage of minority students and married women returning to school in order to prepare themselves to enter the world of work. A review of the enrollment at the College for Continuing Education at Drake indicated that thirty per cent of Drake students taking courses for college credit are adults returning to school at least part time. This figure is as high as 60 per cent, if all noncredit activity course projects are included in the figure. This represents an increase of

of about thirty per cent in the last five years in part time students enrollments for credit and doubles the number of students taking noncredit courses.

Need to Understand the Adult Learner

Colleges faced with dropping birth rates and enrollments are encouraging this trend to re-education. If our institutions of higher education are to maintain their facilities, it will be necessary to accommodate to the needs of the nontraditional student. Because they have special needs, in order to assist them one must understand both the motivation which prompts them to continue their education and the changes occurring in the role of education in modern American life.

Traditionally, education has been an activity of youth, roughly between 6 and 18 years of age. High school education has only become the norm during the last 25 years and an appreciable proportion of the population did not go to college until after World War II. At the turn of the century, it was considered adequate for an individual to be able to read, write, and to do simple mathematics. In a largely agrarian economy there was often little financial support available for students who wanted to attend school, but there was plenty of work to be done on the farm where each child was considered a financial asset important to the family's survival. Most people made their living through hard, physical labor and had little leisure time to devote to study except in unusual cases. There was little background upon which to build higher

levels of education, and the life environment of many was not very intellectually stimulating.

Today things have changed considerably. Education is at a premium because most of the financial advantage comes from work which is intellectual rather than physical in nature. Most people live in populated areas or great cities in which opportunities for higher education are more abundant. Instead of growing up, working, and dying in a small geographical area doing a single task, people today have greater mobility, and opportunities to change occupations make possible economic upward mobility for many. Living in proximity to others puts a greater premium on citizenship, parenthood, and the ability to get along with others. Such things are learned best when the institutions which govern modern life are better understood, and this requires education.

Changing Role of Mature Citizens

Historically, the older members of a society constituted a smaller proportion of the total group. Although "old" is a relative term, the impact of this segment of the population, which understood life better from experience and preserved the institutions and culture of the group, was determined largely on the basis of its longevity. Training was predominantly by word of mouth and from father to son; there was very little formal education available for the group as a whole. Since the young learned most things from their elders, the impact of individual experience on the pool of common wisdom was

direct and apparent in a small society. However, with the advent of printing, the store of human experience upon which society could draw became increasingly impersonal, and the contributions of a single individual gradually became less significant except in rare instances.

As the pool of available experience became more easily accessible, learning itself began to expand at an increasing rate until society could no longer rely on the validity of the knowledge of any single individual or group as a guide to its future action. The consequence has been change on a scale unknown in history and a promise of future change that staggers the imagination.

One consequence of this change is that the individual actually becomes less relevant or obsolete with age instead of more significant and influential unless the individual is able to continue to learn through all his productive years. Improved health, extended life expectancy, economic and material prosperity, and an increased level of aspiration combine with economic necessity to make education a process that is no longer to be viewed as a concern of the first two decades of life. Social survival makes it imperative that education continue in some formal way through a much longer period of life.

Impact of Change on Education

These trends will obviously have a significant impact on our youth oriented educational institutions. In America, particularly, the college campus has been dominated by a sort of youth culture,

perhaps reflecting the values of modern American civilization. Because young people are gathered in colleges in large numbers, their values naturally dominate the world of education, but that world is rapidly changing. The declining birth rate has already limited the number of youths available for higher education. Changes in family life, occasioned by the absence of children, have lessened preoccupation with child rearing and served to heighten personal awareness in many adults, especially women, who are now seeking fulfillment in their own lives rather than in that of their offspring. Efforts to maintain or advance the standard of living in an inflationary economy has made many, especially minorities, acutely aware of their educational limitations, and given rise to increased demands for higher education. It should not be surprising then that considerable change in the college campus will be inevitable in the very near future. Such changes will create a need for trained personnel capable of assisting these people in formulating and achieving their personal goals through a continuing educational process.

Educational Counseling for Adults

As meeting the needs of adult learners in this context implies a concurrent demand for educational counseling and advising skills, it becomes important to formally define what is signified by the term. In practice, educational counseling can be defined very simply as counseling for overcoming educational handicaps. The term counseling refers to a process of communicating deeper concerns to another

for assistance in resolving conflicts or gaining more objective views of the nature of problems. The phrase "educational handicaps" refers to training or skill deficiencies of an academic sort which make further learning in a particular area either unnecessarily difficult, unlikely, or even impossible.

The distinction between educational counseling and other types of counseling is primarily a matter of orientation. Before anything can be a counseling matter it must pose some difficulty or threat to the person or some aspect of the effective pursuit of self-fulfillment. In educational counseling, the central focus is on learning difficulties encountered in formal educational processes. This sort of counseling differs from psychotherapy primarily in the depth and nature of the problems dealt with. The counseling processes properly identified with psychotherapy are generally of such basic sorts that they affect a great portion of the total life functioning of the individual. Increasingly in today's society, there are numerous situations in which, in a broad sense, one's life functioning can be seriously impaired by academic or scholastic difficulties because of the central role of education in survival in today's society.

Society has changed and will continue to change to such an extent and with such rapidity that in the course of the normal working life, any individual can expect the need to be re-educated or re-trained several times before retirement. Formal education then is becoming a life-long need today, and is crucial for individual

economic and psychological survival in a changing world.

No doubt individuals have personal reasons for wishing to further their education. They wish to know how to get along with others better, how to make a positive contribution to the solution of social problems, how to enrich their leisure time, how to develop their human potential, and especially women, how to live in a freer society. Most persons entering adult education programs have a specific goal in mind. It may be phrased in somewhat general terms, for example, learning to accept social responsibility; or it may be more specific, for example, to prepare for a particular job. Adults may enter education to satisfy psychological needs, because they feel intellectually alone and seek stimulating companionship of fellow learners. Undoubtedly a large number of adults enter education simply because they are curious and enjoy the challenge which study offers. The emotional significance of education to the individual depends on these motives.

Types of Adult Learners

1. Anxious learners

In reviewing their case histories, it becomes apparent that fear in some form is a primary factor in the learning problems of a rather large proportion of adult learners. Many individuals undertake educational programs with enthusiasm and determination only to be overwhelmed by concern about their ability to progress or learn. This concern makes it increasingly difficult for them to concentrate on their studies. In this condition they

tend to exaggerate family difficulties, financial problems, etc., and soon begin to fail examinations and get behind in their work. If such individuals are exposed to criticism or correction at this time, they will almost certainly withdraw from school. The root of their problem seems to lie in a poor self-concept and their major need is for signs of support to help them overcome their sense of insecurity. A young widow client, seeing her limited insurance and savings being spent on securing an education and fearing ultimate failure, suddenly decided to leave school and take a job as a secretary as a result of a low mark on a midterm exam. The position she took was not commensurate with her ability or particularly appealing, but it was able to allay her anxiety and insecurity about herself. Out of fear she needlessly resigned herself to a life's work that will only lead to frustration because it does not provide her with an outlet for her creative talents. Her problem, of course, was primarily psychological in nature, not academic; however, the two work so closely together that they can easily be confused by the student, with unfortunate results.

2. Frustrated learner

The difficulties of another large group of learners seems to be rooted in a developing sense of frustration. At times, individuals who appear relatively successful and financially secure review their lives and accomplishments and become gravely dissatisfied with their estimate of their achievements. They may have been profoundly influenced by a special insight given them by another

well-educated or stimulating individual with whom they have had special contact. This type of individual decides to change things and enrolls in college courses and begins work with enthusiasm and energetic dedication with no thought of failure. After a few weeks these students come to realize that study is quite demanding and interferes substantially with their leisure life habits. When such individuals realize the work ahead of them, they begin to question their capacity and rather easily conclude that they lack the intelligence or talent to pursue the subject further. They often rationalize that they are not really interested in the subject and drop the course, but because they have a past success pattern to build on, they often attempt several other courses with similar disappointing experiences before eventually giving up in despair. The tragedy of this type of student is that their vision of what life could be has made them hopelessly dissatisfied with what they are, yet without education it will be impossible for them to realize their ideals. Counseling in this situation may resemble psychotherapy.

3. Impulsive or superficial learner

A third type of learner encountered in adult education may be described as the impulsive student. These students are frequently financially independent, and lead busy social lives. They have means and talents and put both to use in the solution of various social problems. Often such individuals are seeking for an integrating influence in their lives, something that will give deeper meaning and more permanent satisfaction to their existence. They begin taking courses as part of this search.

It is important for the counselor to be able to distinguish between the impulsive type of learner, who begins an educational program without reflection or intelligent planning, from the student who simply outgrows an area of study. The desire for new challenges and different learning experiences to satisfy one's curiosity is positive and grows with the acquisition of knowledge. This should not be confused with taking course work as a form of entertainment or escape. Impulsive students may actually succeed in their work because they are naturally talented, but they become dilettantes and psuedo intellectuals without much scholarly substance or honest personal growth. Study as a form of recreation is not bad if it is recognized as such, but it may also develop into cynicism and lay the groundwork for a know-it-all, smug personality.

Specific Concerns of Adult Learners

It is useful to know the more common problems of adult learners in order to be better prepared to assist them in achieving their educational objectives. These problems seldom occur in isolation and can be expected to be functioning more or less simultaneously in various degrees at any given moment for any individual.

Lack of Self-Confidence

Probably no other single concern is more universally encountered in counseling individuals with educational problems than the lack of confidence in their ability to learn. It is almost universally true that adults, to some degree at least, feel they are unable to learn as well now as when

they were young. At the cognitive level, most people recognize that not everyone can learn everything, that people differ in intelligence, and that only a few people become outstanding novelists, mathematicians, poets, etc.. The concern of adults is not with such outstanding achievement but rather a fear that they are below average, that they cannot learn what even normal people are able to learn.

This fear appears to have two primary sources: first, a belief that somehow age limits one's learning ability, and, secondly, an emotional concern that some important element is lacking or neglected in their personal development. They wonder, for example, whether they have normal intelligence, or whether they have the talent needed for learning a particular subject field.

Such people need reassurance from a counselor who is able to answer specific questions about learning abilities of adults. Experimental evidence indicates that a comparison of the relative learning ability of young people and adults does not suggest adults have any serious handicap in academic learning. Actually, adults appear able to learn most things a little better than youth, but it may take them a little longer.

Youth appears to have some advantage in learning which requires physical dexterity or strength. This is not surprising, but even physical strength can be greatly improved in older persons with scientifically designed exercise. The young appear to be better at rote learning tasks, that is, things that are not particularly meaningful in themselves

because adults may find it necessary to unlearn certain things since their habits are more deeply set. This is not the sort of learning, however, which is required in most educational programs.

Adults have some advantage in learning. They generally have greater motivation, more settled purposes, and their attitude toward learning is more mature. With maturity the adult has acquired greater experience and developed a broader range of associative patterns and therefore a greater awareness of values, considerable practice in self-discipline and a better knowledge of personal abilities. These must all be accounted advantages.

This underlying lack of self-confidence may not be apparent at the beginning of an educational program. It does, however, reveal itself quite readily when the student encounters difficulty in learning and begins to fall behind in his work. At this point, age often becomes a rationalization and these students will frequently verbalize the belief that they cannot learn now as well as when they were young because they have been away from studying for years and have forgotten how to use their mind. This may be somewhat true and it is advisable for older students returning to school to brush up on their learning skills, but it does not mean that he cannot learn as well as the younger student. Study methods are far more important than age in most all cases.

In all honesty, one must admit that some adults in fact can't learn as well as youth. If they are slow learners now they possibly were not very good learners

as children either. However, they feel that because they are adults they are expected to be able to do everything better than children. This is simply not true. So long as one works to capacity there is no need to make excuses for ability.

From the counseling point of view, when the adult has limited intellectual ability, the problem is one of suiting ambitions to abilities, or aspirations to aptitudes, not questioning abilities. When the educational problem seems to center around ability itself, the best course of action is to get a reliable diagnosis of that ability.

Most adults tend to underestimate their ability. When fears are expressed about their ability to learn, the counselor is well advised to ask such students, "How do you know for certain that you can't learn unless you try?" One need not aspire to become the world's leading authority in a field to find pleasure and satisfaction in studying a subject. From another point of view, the less a person knows the more there is to gain from study.

Counselors should expect that a good percentage of adults re-entering education will have dark moments and discouraging experiences and considerable self-doubt, and be prepared to deal with these by providing positive reinforcement and a realistic evaluation of both goals and abilities.

Unrealistic Expectations of Progress

During many years of life, adults have learned to apply their efforts in areas where they are able to build on their past

successes. To strike out into new and unfamiliar areas, therefore, might prove very threatening to them. When a child attacks a problem, he expects to do much more work to achieve his goal than the average adult who somehow feels above all this. Some adults act as if they are exceptions to the rule of hard work. Their goals are set, they have strong motivation and considerable life experience, therefore they conclude they should have an unusual advantage. However, there is no royal road to learning, all must take the same route.

In counseling adults to set realistic goals, the following topics should be discussed carefully:

a. One must be realistic about what can be achieved, especially about the amount of time required to achieve it.
b. One must be careful not to begin impulsively on an ambitious learning program about which he is poorly informed. The better one understands the work required, the better it is.
c. One must be certain that the chosen goal is really wanted. Is it important personally, or is it just something which is nice or desirable? Is the work required proportionate to the value one sets on the goal?
d. After setting broad goals it is highly desirable to divide them into specific subgoals which one can achieve in short periods of time, perhaps monthly or even daily. Such a breakdown provides more immediate reinforcement and promotes sustained application. It is necessary to have clear measures of progress to sustain one's motivation. The completion of

minor daily and weekly goals provides an obvious means of measuring progress and nothing succeeds like success.

e. One should learn to enjoy the process as well as the goal of learning. Enjoying the process makes the work of achieving the goal much more pleasant and tends to make learning an integral part of one's life.

Conflicting Values and Attitudes

Attitudes and points of view strongly influence the learning processes. As people grow they form definite opinions and attitudes which influence learning for good or ill. For example, an adult who has worked as a labor leader will approach an economics course from a substantially different viewpoint than an industrialist who has been associated only with the management function of business.

Such fixed attitudes and values may cause difficulties for older persons attending classes in which a variety of points of view and attitudes toward a subject are not only tolerated but even encouraged. In such a situation, the adult might feel the teacher knows no more than the students or is failing to exercise proper authority by not insisting on his own views. In counseling such students, one should try to develop an appreciation of the fact that an important part of education consists in developing an understanding of a variety of points of view.

Older adults might feel it is their duty to settle class problems and impose their view on all, or perhaps try to

monopolize the conversation to keep the discussions orthodox. Such students should be cautioned that these traits are not acceptable to the rest of the class and might make them feel unaccepted by the group. Adults may share their insights but they should not expect their opinions to have any greater weight than anyone else's. Sharing opinions is different from forcing one's ideas on others. It is useful to encourage such students to concentrate on learning why each person holds his view and try to understand the position, not correct it. Education becomes quite difficult for an individual whose values and opinions have hardened to the point that he cannot tolerate new ideas or opposition to his own position.

Abstract or General Learning Tasks

Many older individuals are impatient with subjects which are taught in general or theoretical fashions. Such a perspective appears to them irrelevant to life as they have experienced it. The counselor should encourage such students to compensate for these feelings by making special efforts to apply or relate their learning to their lives or life problems. The application of knowledge may profitably take the form of further questioning, argumentation, discussion, or problem solving.

An entirely new subject may be difficult to integrate in this manner. In this case it is useful to develop a background and acquire fundamental principles beforehand. Basic introductory books or popularized nonfiction books on the same topic are splendid resources. It might even be wise to take a noncredit refresher course

before the student begins a degree program where grades are important.

Not Seeking Help

Because students themselves may be unaware of learning difficulties or be afraid to face them until they make their presence felt through failure or threat of failure in an exam, the counselor should be particularly sensitive to students' learning behavior early in the course. Unless students are given special help at this point, the stage may be set for ultimate failure. A good rule-of-thumb to follow is this--if a student does not feel that he is making progress he is probably headed for difficulty. Reviewing class notes and study schedules are good places to look for early indications of difficulty. Many students need a little extra help when beginning a completely new course of study. Since the best guide and counselor in learning will often be found in the teacher, the student should be encouraged to ask teachers for supplementary materials as aids to learning the course.

Another area to consider when counseling adult students is the entirely lecture-oriented class. Such courses are not likely to remain popular with adult students for long because adults prefer to participate in discussions, to raise questions, and seek concrete applications. Unfortunately, lectures do not usually permit this. Adults also seem to learn better in groups which provide opportunities for sharing ideas and in which they can profit from observing the mistakes of others. Such group learning provides a spirit of friendly, accepting rivalry

which is stimulating, challenging, and supportive to adult learning and more in keeping with this learning style.

The amount and type of family support given adult learners in their studies is also important. Where the family is not sympathetic or cooperative with the student's educational aspirations, study can become very difficult indeed. Without family support, it takes unusual determination for a person to persevere very long. Everyone seems to need at least one close confidante who is supportive of his effort. Obviously, the counselor is a prime candidate for the role.

Lack of Efficient Reading and Study Habits

The majority of adults returning to school would be well advised to enroll in short refresher courses on learning to learn and reading improvement at the outset of their program. If such a course is not available, at least a textbook on the subject should be reviewed very carefully. The major topics of need include:

a. Preparing to learn, that is, setting the stage psychologically and physically for the learning process to occur. This includes clarification of educational goals and a clear understanding of program course requirements.
b. Organizing to learn--this helps the individual develop a time schedule to allow for adequate study and travel time as well as preparing a properly equipped place for study at home or in the public library.
c. Techniques of study--this should include textbook attack skills,

methods of organization, outlining techniques, SQ3R reading, knowledge of how to use learning aids included in textbooks, etc.

d. Listening, notemaking, and test taking skills--students should be aware of the particular reading skills necessary to effectively study various subjects. They need to know what to look for when reading novels, essays, and poetry, for example, and should understand that they are not expected to read everything in the same way. Many adults have not thought about reading for specific purposes for many years and would do well to review a manual which would provide them with guidance and direction in learning to read for details, reading for the general idea, reading to understand principles, reading to discover organization, reading to solve problems, and reading to follow directions. Many such students would benefit from a course in vocabulary improvement as well. Special attention should be given to exam skills because many adults may not be familiar with the newer objective type tests frequently used in our schools.

These constitute the more common types of academic problems of interest to educational counselors. It should be noted, however, that almost any other problem the student is having whether related to financial affairs, physical health, personal relations, self-concept, concern for society, etc. will have some bearing on learning ability. The process of education itself, however, is very

frequently therapeutic and an effective remedy for many difficulties if the student can but persevere.

Given normal intelligence, average health, and even modest means, probably the most important ingredient in the process of continuing education is perseverence. The value of many aids, services, and facilities offered adult students can be measured in terms of how they contribute to this one element of persistence. It is persistence that brings a person through dark periods in the growth pattern; it is persistence which guarantees ultimate success; it is persistence which enables counselors themselves to achieve their purpose in helping students.

Back to School Survival Skills Program

At Drake University, The College for Continuing Education in working with adults returning to school realizes that the adult student has needs that are different from the 18-year old high school graduate. They have more fears about various technical learning skills. "Will I be able to take a test, make notes, write a paper? Can I perform in a classroom of younger students?" There are also concerns about the use of campus facilities and sometimes too much embarrassment to ask the proper questions.

"Back to School Survival Skills" is an orientation course designed to meet the specific needs of the adult who is returning or considering a return to college.

The objectives of the course are to

provide the returning adult student with:

- --A realistic and positive self-concept, particularly as it relates to the ability to learn
- --An opportunity for personal assessment of present reading vocabulary, writing and study skills
- --Techniques for improving study skills such as reading to learn, concentration, improving memory
- --Techniques for improving classroom skills such as listening, notemaking, test taking
- --Information concerning supportive services offered at the university
- --An orientation to the college campus using the library, campus tours, etc.

The course is offered for four days, from 7 to 10 p.m., carries 1.2 CEU's and the fee for enrollment is $35.

The first session is entitled Personal Development and Preparation for School. During this session the importance of need for communication and the need to be aware and open to new experiences is stressed. Another major goal of the session is the clarification of the role of self-concept and its influence on life and learning. The advantages of the adult learner are presented and the effects of negative and positive self-concepts are evaluated. Ways of improving self-concepts complete the discussion.

Memory is the name of the game when it comes to studying in the minds of many people. Aids for memory therefore constitute an important discussion. The role of the student in the classroom and ways to make constructive contributions, rules

for effective listening, reactions to differences of opinion, and speaking in a pleasant way are emphasized. The final area of discussion deals with writing skills and theme preparation. Such topics as organization, grammar, spelling, bibliographical references, and creativity are included.

During the second session, emphasis is laid on preparing oneself for learning and the development of a personal skills profile. The skills profile is both motivating and enlightening for adult students. In developing the profiles, students are given a reading test, vocabulary test, and study skills inventory and writing test. Subscores from these instruments are plotted on a profile sheet and specific remedies for particular deficiencies are checked off for attention. The various dimensions of academic success, ways of setting realistic academic goals, and the characteristics of successful students are clarified by studying various handicaps which many people have which limit their study efficiency.

The third session deals directly with classroom skills, and reading improvement. Techniques of study, the study hour, effective textbook attack, reading to learn, improving concentration, and learning to remember what is read are all discussed and demonstrated with suitable exercises.

Other classroom skills presented include listening techniques, notemaking skills, and test taking methods. The Reading and Study Skills Clinic with its various services, counseling opportunities, and credit courses are explained

to the students. Testing and enrollment procedures are discussed and explained and students are given an opportunity to meet different members of the staff.

On the final day, students break up into small groups. After discussing the problems of group dynamics and the ways of forming groups, techniques of problem solving are all demonstrated through simulated exercises.

An exploration of the library with an interesting information finding assignment provides the students with an opportunity to use the library and learn where different types of information are located. Other places visited during campus tour include the administration building, the health services, the different colleges, and certain offices of importance such as registrar's office, campus security, job placement services, the student center, the fine arts complex, and the athletic field.

Students wishing to explore their vocational preferences have opportunities to complete the Strong-Campbell Interest Inventory and have it interpreted on an appointment basis at the end of the program.

The program is tremendously popular and has been so enthusiastically received that it is now being considered as a permanent course offering. One of the features of the program which lends to its strength and possibly its popularity is the fact that once the student has diagnosed his deficiencies, the Reading and Study Skills Clinic is ready to provide the remedial program for support courses

to remedy the deficiency. This is done through enrollment in a study skills course or in a reading improvement course. Offerings in the RSSC are set up on a modular basis so that students can select specific skills which need improvement, and begin immediately to work on them. This has the advantage of being efficient of the student's time and providing immediate attention to discovered needs.

The program attracted national attention as a result of coverage given it by the Associated Press and Public Broadcasting Service. The College for Continuing Education and the RSSC together received something over one hundred inquiries about the program in the last three months.

Student evaluations of the effectiveness and suitability of the program for their needs is extremely high and the promise of the effectiveness of such programs elsewhere seems to bode well for the adults who will be returning to college in the years to come.

Conclusion

The return to the college campus of many adults as a result of legal requirements for maintaining licensure or vocational skills in an era of changing technology and the rising aspiration levels of certain segments of society present the modern campus with new challenges. The presence of a greater percentage of mature students with different motivations and attitudes toward study will affect the tenor of the student body, pedagogical approaches and the nature of support services offered by

the administration.

This paper has outlined the major types of counseling needs of such students and signaled the development of specialized counseling skills that will be needed to meet the needs of such students.

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